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ABSTRACT

This yearbook contains the following 24 articles on a variety of topics: "A Model for Diagnostic Narratives in Teacher Education" (B. J. Walker); "Teacher Expectations: Modifying One's Teaching through the Self-Monitoring Process" (T. R. Blair and D. L. Jones); "Preparing Teacher/Researchers" (M. W. Olson and M. K. Gillis); "Student Teacher Use of Content Reading Strategies" (E. G. Sturtevant and M. W. Spor); "Literature Study Groups in a University Methods Class" (D. Wells); "A Comparison of Ratings of Student Performance by Supervising Teachers, Reading Specialists, and Preservice Teachers" (J. R. Johnstone); "Early Reading Assessment and Teacher Decision-Making Practices in Kindergarten" (C. A. Hodges); "Process of Change in Teachers' Beliefs, Attitudes, and Concerns during a Series of Whole Language Reading and Writing Workshops" (O. Nelson and others); "Content Area Reading Practices: Relationships of Teacher Usage and Ability" (K. F. Thomas and S. D. Rinehart); "National Accreditation and Its Effect on the Literacy Professional: The Making of a Profession" (M. L. Hanes and J. Cassidy); "Invtd Splg Sts Thm Fre 2 Rit" (E. G. Pryor); "Methods and Approaches for Fostering Reading Fluency in Classroom and Clinic" (B. Walker and T. V. Rasinski); "Providing Mediated Instruction to Enhance Students' Note Taking and Reading Comprehension" (V. J. Risko and others); "A Comparison of the Effectiveness of Content Area Reading Strategies at the Elementary, Secondary, and Postsecondary Levels" (J. Swafford); "Involvement of University Faculty Members in Basal Reader Adoption Procedures" (B. D. Roe and E. P. Ross); "Informal Reading Inventories: A Holistic Consideration of the Instructional Level" (J. L. Johns); "Improving Disabled Readers' Summarization and Recognition of Expository Text Structure" (R. Weisberg and E. Balajthy); "Analysis of Cue Strategies of Disabled Readers" (B. M. Fleisher); "Criteria for Decisions: Best Methods for Whom?" (L. R. Putnam); "Developmental Education Students' Perceptions of Effective Teaching" (G. M. Padak and N. D. Padak); " At-Risk' College Students: Their Perceptions of Reading" (C. Gillespie and J. Powell); "Langston Hughes, Maya Angelou, and Malcolm X: Guides for College Developmental Writers in Search of a Voice" (J. K. Stadulis); "Learning Style Inventories: Efficiency Tools for College Instructors" (J. E. Walker); and "Workplace Literacy: A Model for Program Development" (M. D. Siedow). (MG)

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CHALLENGES IN READING

The Yearbook of the College Reading Association
1990

CHALLENGES IN READING

Twelfth Yearbook
of
The College Reading Association

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A Foreword that Also Looks Back

JERRY L. JOHNS
Northern Illinois University

This *Yearbook* carries the designation of Volume 12. It follows, after some 20 years, Volume 11 of the *Proceedings of the College Reading Association* edited by Clay A. Ketcham. Published in the fall of 1970, its 137 plus pages contain a forward by Robert M. Wilson and a President's Address by Uberto (Bert) Price. The President-Elect was Jules C. Abrams. All three of these individuals have remained active CRA members. The 23 papers in the 1970 *Proceedings* focused on a variety of topics. A sample of topics includes diagnostic teaching, in-service training, study techniques, and critical reading.

The present *Yearbook* contains 24 papers selected by an impartial review process. The members of the Review Board deserve special recognition for their rigor, fairness, and ability to meet deadlines. Special thanks are also extended to Nancy Padak, Tim Rasinski, and John Logan for all their intense labors to bring this *Yearbook* to fruition. As you begin reading the papers in this volume, I quote Bob Wilson from Volume 11 who said, "We are hopeful that you will find them as enjoyable as we have."

Preface

This volume marks the return of the College Reading Association *Yearbook* after a hiatus of several years. As new editors, we felt challenged by the opportunity to put together an intriguing and provocative book that reflects the diversity of interests and expertise in CRA. We believe that we have accomplished that goal. The range of topics found in the papers is reflective of the divisional make-up of CRA. Moreover, the diversity in types of papers, as well as methodological approach, demonstrates the wide-ranging interests and eclectic nature of our membership. We are confident that readers of the 12th CRA *Yearbook* will be challenged and moved by the issues raised in this volume.

We wish to thank Gay Fawcett and Beth Dawson for their considerable contributions to the development of the *Yearbook* and Karen Brothers and JaNoel Lowe who typed and typeset the volume. We also wish to acknowledge the CRA Board of Directors for its support of the *Yearbook* and the presenters at the 33rd Annual Meeting in Philadelphia for their enthusiastic encouragement and support of this enterprise.

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CHALLENGES IN TEACHER EDUCATION

A Model for Diagnostic Narratives in Teacher Education

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Although the concept of reflective practice is becoming prevalent in teacher education, few models exist for training preservice teachers to be reflective. Preservice teachers learn not only from experiences such as student teaching but also from reflecting on those experiences (Zeichner & Liston, 1987). This reflection frees teachers from routines and enables them to act intentionally (Jaggar, 1989). Furthermore, teachers who use these reflections and shift to alternative teaching strategies produce higher student achievement on high-level cognitive tasks (Brophy, 1984). Even though reflective practice advances both the teacher's knowledge and student achievement, teacher education programs provide few opportunities for preservice teachers to describe and reflect on their teaching and the adjustments they make (Schon, 1988). Therefore, models for encouraging preservice teachers to choose among competing alternatives and to reflectively analyze the impact of that choice are needed (Alvermann, in press). An on-campus reading clinic is an ideal setting for preservice teachers to develop and use this reflective process. This paper presents one model for teacher education that uses diagnostic narratives as a tool to develop reflective practice among preservice teachers.

CONCEPTUAL ORIENTATION

The reading clinic program at Eastern Montana College emphasizes the preparation of teachers who can adjust instruction to meet the individual

needs of problem readers and reflect on why and how the adjustments worked. This goal is directed toward enabling preservice teachers to develop the skills necessary for solving complex instructional problems within the social context of schooling. Underlying this goal is the assumption that informed decision making and instructional planning are based on well-developed rationales, inquiry based on observations, and reflective analyses of literacy events. The reading clinic curricula are based on the belief that this goal attainment is a result of a reflective thought process that analyzes the relationship between explanations from observations (inquiry) and explanations grounded in theory (rationales). Therefore, the reading clinic program seeks to encourage preservice teachers to become more aware of themselves in an instructional context so that their perceptions of the complex demands of teaching become dynamic. This, in turn, will develop the reflectivity necessary for these teachers to assume greater roles in determining the content and processes of their own teaching than is presently reported for first-year teachers (Brophy, 1984).

The conceptual orientation embodied in the program is that reflective practice is a recursive process where theory informs practice and practice informs theory (See Figure 1). Both preservice and veteran teachers make instructional decisions based on their guiding theory of reading — the teachers' own stances about the reading process, human growth and development, human learning, linguistic development, teaching, and student attributes. Out of this guiding theory teachers develop rationales to support their instructional plans. During instruction, teachers observe students interacting within the literacy event; these observations inform their decisions while teaching. After the lesson, teachers reflect by analyzing how the interactions (including their own stance) affected their goals for the lesson. Finally, teachers collaborate and discuss what happened, verbalizing their observations and modifying their theoretical stance. This final stage informs theory and the reflective process begins anew.

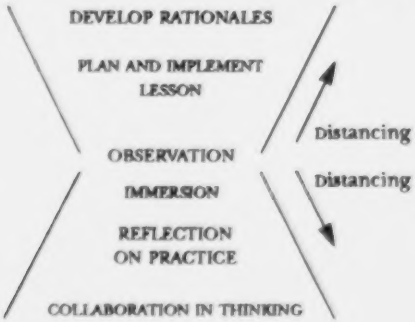

Figure 1. A reflective stance to teaching.

Embedded in the recursive process is a shifting between total immersion as a participant in the literacy event and the distancing of one's self from participation in order to critically analyze the experience. Distancing encourages preservice teachers to reconsider their reasons for instruction and the theoretical framework that underpins their decisions.

THE SETTING

In this program, preservice teachers work in a social context (reading clinic) where they are supervised by the teacher educator while implementing the curriculum (diagnostic reading instruction). Each of these components is further delineated below.

Preservice Teachers

The program seeks to prepare diagnostic teachers who view reading instruction as problematic and socially constructed rather than as certain. Through inquiry, the preservice teachers develop a view of the reading process as constrained by a particular event rather than a prescribed program of skill acquisition. Each preservice teacher works with one reader who has been referred for difficulty in reading. The preservice teacher plans and implements 14 one-hour diagnostic teaching lessons. While teaching, the preservice teachers record observations. After instruction, they review those observations in light of what was planned and reflect on the congruence between expected outcomes and what actually occurred. Reflections give rise to a new plan that is implemented, and the cycle continues. This process constitutes a diagnostic narrative that will be described later in the paper. Thus, the goal is for preservice teachers to view their roles as creators of curriculum based on their theoretical stances and the observed behaviors of problem readers.

Curriculum

The reading clinic curriculum reflects the view that knowledge is socially constructed and reading is an active process. This view allows preservice teachers to shift between reader-based and text-based views of the reading process and to relate students' individual differences and the social context of instruction. As Zeichner and Liston (1987, p. 27) point out, "Reflective curriculum does not totally predetermine that which is to be learned but makes provisions for the self-determined needs and concerns of preservice teachers as well as creation of personal meaning." As such, the expectation is that preservice teachers reflect not only on what they are learning in terms of individual difference, but also on how they are using this knowledge in the diagnostic teaching sessions.

Social Context

The social context is an open classroom where groups of preservice teachers, supervisors, and problem readers work together toward creating a

literate environment. Each teaching dyad has an instructional area along the side of a large room. In the center of the room, books for independent reading are displayed on low shelves and large group areas are available for story book reading. Because of the open space arrangement, preservice teachers collaborate more freely in using materials and planning activities. In this inquiry environment, relationships between teacher educators and preservice teachers are collaborative. Additionally, continual examination and evaluation work toward ongoing development based on experience, theory, and inquiry.

Teacher Educator

Teacher educators supervise the ongoing instruction in the clinic. Prior to and after each teaching session, the teacher educator is available for individual conferences with the preservice teachers. Each teaching session begins with a large group experience when the teacher educator models reading aloud different kinds of text using predictive listening formats. Likewise, the teacher educator participates in silent reading and writing time. Thus, the teacher educator is viewed as part of the instructional program. While the preservice teachers are teaching a single student (teaching dyad), the teacher educator phases in and out of teaching dyads modeling techniques and suggesting alternatives when necessary.

INSTRUCTIONAL COMPONENTS

Preservice teachers attend a seminar on diagnostic reading instruction in addition to their instructional responsibilities. As a prerequisite, the preservice teachers have completed two courses in reading instruction, one course in educational psychology, one course in human growth and development, and a 28-hour observation in the public school. The reading clinic seminar and practical experience build on this knowledge. Embodying the model of reflective practice, the reading clinic program has four major components: the seminar, practice (teaching), diagnostic narratives, and supervision (see Figure 2).

Seminar and Practice

The seminar, taught by the teacher educator, deals with the theoretical underpinnings that guide instructional decision making. Students refine their understandings of the reading process, assessment of individual differences, and rationales underlying alternative possibilities; they evaluate their own knowledge of teaching. In the seminars, preservice teachers establish a collaborative approach to problem solving and inquiry into their teaching.

Lesson plans are designed to address overall reading performance, skill and strategy development, teaching assessments, and personalized reading

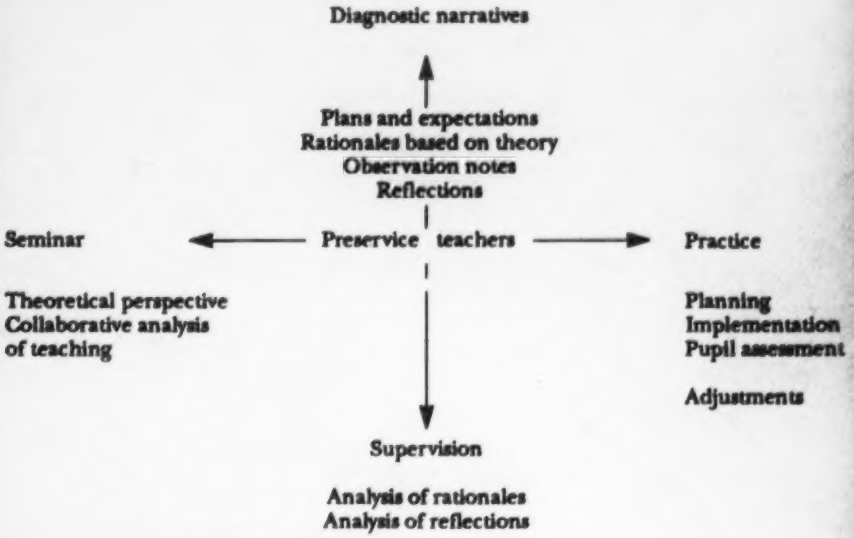

Figure 2. Instructional components.

and writing. The program emphasizes pupil evaluation and modifying instruction to meet individual, identified needs.

Diagnostic Narratives

Diagnostic narratives are an integral part of the preservice teachers' growth in understanding both the reading process and atypical learners. This component allows the diagnostic teaching session to serve as a laboratory for self-study rather than simply a model for practice. It seeks to reiterate that a teaching practicum is a basis for self-directed growth rather than "a time merely for the application and demonstration of previously acquired knowledge and skills" (Zeichner & Liston, 1987, p. 27).

The diagnostic narratives include four components: plans, rationales, observations, and reflection. These are recorded on open-ended lesson plan sheets as shown in Figure 3.

First, preservice teachers plan a diagnostic teaching session that includes guided instruction of a whole story, minilessons in needed skills and strategies, assessment, and personalized reading and writing. A rationale for each element of the plan is proposed. The preservice teachers draw upon their theoretical knowledge and think about the purposes for the activities they plan. As they develop these rationales, they become creators of curriculum. They base the reasons for activities on the following: (1) the reading behaviors of the student, (2) the reading process (guiding theory),

Diagnostic narrative sheet

Client's name _____ Tutor's name _____

Instructional range _____ Session number _____

Plan	Rationales	Observations	Reflections

Figure 3. Diagnostic narrative sheet.

and (3) the task of reading. Using these guidelines for rationales, their thinking goes beyond simple task objectives to explaining how a student's behavior fits the reading process and the task.

For example, one student wrote the following rationale for her plan to teach fluency.

I chose to use a predictable book for this because Chris' fluency is quite poor. With this type of book there is a pattern and it can improve fluency if he picks up on it. By using the repeated readings method there is more of a chance for that to happen.

Two sessions later the rationale had expanded to the following:

I don't want Chris to think that he can only read smoothly if he does it over and over again. Because of this, I'm using chunking as well as repeated readings. This will also increase his fluency as well as his knowledge of how to group words that form a complete thought.

Teachers need to know why they taught as they did and be able to explain it to others (Jaggar, 1989). By constructing rationales for their plans, these teachers use their guiding theories in concrete experiences where they can observe theoretical principles in action.

During instruction, preservice teachers record observation notes that can later be elaborated and reviewed to inform instruction. Since they are also participants in the teaching/learning situations, their observations are focused on critical aspects of the student's learning. Observations heighten the preservice teachers' sensitivity to the reading process and the relationship between expected reading behaviors and actual reading behaviors. Observations often result in changing an original plan, thus requiring teachers to modify and adjust instruction as they teach.

Another student observed her student focusing on the process of comprehension (Jordan, 1989).

While using the reading log, I became aware of how incredibly tied she is to only text. We struggled to find relevant background (I know this) knowledge which would influence the prediction.

During the next session, she observed the following:

Her ability in using the techniques is improving and she is beginning to use them on her own. Literal and non-literal comprehension is up. But while recall has improved, non-literal comprehension, main idea, summary questions are still very text-based without much extension. She is getting more right but I would like to see more integration between print and personal meaning.

Finally, preservice teachers reflect on each instructional session. Reflection informs future planning and practice and is also extended to include personal evaluation of instructional decision making. Thus, reflections include the following:

1. Reflection on the lesson—an evaluation that ties together the plans, adjustments, and observations. For example, Jordan (1989) wrote the following:

During the lesson, I discarded the story map, modeled self-talk, self-questioning, and especially prediction. Used the story map as a summary for after. Good modification. Much happier with results. She elaborated and answered with background knowledge the comprehension questions today.

2. Reflections on interactions—an evaluation of the prompts and scaffolding that occurred to ensure learning.

On day 7, I could tell she was trying hard to predict. I kept trying to bring different ideas to the surface for her to predict. On day 9, I had to model continuously to try and explain this process (self-directed questioning). Then on day 11, I couldn't believe the improvement from the first day (on prediction). I need to model and model! She has ideas, but seems scared because they may not be correct. I tell her it's a guess or bet. She then can relax and enjoy—but only twice.

3. Reflection on guiding theory —thinking about how this instructional event brought a new understanding about reading theory. This ties together rationales and reflections. Jordan (1989) stated her rationale for using coaching and modeling and reflected on her own learning, as seen below:

Rationale: Misty is a passive reader (I suspect, since I haven't done the formal testing) and I need to cause her to relate actively to the text.

Reflection: After I looked up passive reading, I understand that there is no testing that particularly tests this element. It is determined by observation and analysis of the reader and the reading event. Misty is definitely a passive reader.

Supervision

The diagnostic narrative sheets (see Figure 3) become integral parts of the supervisory process. They are used in informal dialogue with students and provide a basis for collaborative group work during the seminar.

Additionally, they are shared with supervisors who respond in writing to the preservice teachers' entries. These written comments are discussed with the teacher educator, and the preservice teachers are encouraged to move to an increasingly higher level of the reflective process. Thus, these narratives provide preservice teachers with a vehicle for systematic reflection on their development as teachers.

THE IMPACT ON PRESERVICE EDUCATION

This model of teacher preparation views teachers as decision makers and curriculum developers who are constantly refining their models of reading and reading instruction. The diagnostic narrative is viewed as critical for adjusting curriculum to meet students' needs and for developing a reflective stance to teaching.

As preservice teachers implement their plans, instruction is enhanced by the requirement to make key observations about student learning. The expectation that observation is critical for formulating future lesson plans focuses their thinking from management concerns (Am I on the right page?) and delivery concerns (Did I include the phonic lesson?) to learning and processing concerns such as the following:

- Are the students comprehending this text?
- How are the students constructing meaning?
- Are they using prior knowledge?
- Are they monitoring understanding?

Refocusing observations from content delivery to student learning, then, impacts instructional decision making and planning. Using the diagnostic narrative, preservice teachers begin to tie learning experiences together rather than focus on single reasons for events. Beginning teachers worry about the activities they plan. However, diagnostic narratives force preservice teachers to consider the reasons for their plans based on their observations of student learning and interactions during instruction. They think about whether interactions were consistent with their plans and with their beliefs about reading. This continued self-dialogue causes them to revisit their textbook and read sections with increased ability to elaborate their theories of reading and reading instruction.

Likewise, the diagnostic narratives provide the distancing that is necessary as the participant-observer (preservice teacher) becomes totally immersed in the literacy event. Teachers often need to distance themselves from the literacy event in order to refocus and analyze the observations. The inquiry process shifts from total immersion and participant observation to reflective analysis of the event and the theoretical framework. Additionally, the writing of rationales ties the theoretical underpinnings of instruction to practice. As they shift between theory and practice, preservice teachers continue to add to their repertoire of strategies, knowledge, and understandings about children's reading processes and individual differences.

CONCLUSION

In this paper, I have explained the goals and concepts undergirding the Reading Clinic at Eastern Montana College and have described diagnostic narratives as a procedure for tying theory to practice to encourage inquiry. This model prepares teachers who are willing to assume more central roles in developing and sharing their own reading programs. The preparation of reflective teachers who can outgrow their own knowledge is imperative in a society where change is the norm.

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Teacher Expectations: Modifying One's Teaching Through the Self-Monitoring Process

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Identifying characteristics of effective teachers of reading has been a fruitful area of inquiry in the last 20 years (Wittrock, 1986). Many of the qualities of effective teachers of reading identified in studies of classroom teaching have centered on the use of time in the classroom (i.e., maximizing time-on-task through effective use of groups and materials utilizing the direct instruction approach). Yet one characteristic of effective instruction focuses on what teachers believe and the consequences of such beliefs. Studies have shown a positive relationship between teacher expectations and student achievement (Ashton & Webb, 1986). It is a truism that one's expectations for students in reading instruction may bias one's actions and influence subsequent learning. In such instances, students sense what is expected of them in reading and behave accordingly. A teacher's expectations can become a self-fulfilling prophecy and thus are a powerful force in effective teaching.

TEACHER EXPECTATIONS

Good and Brophy (1987) have studied teacher expectations and student achievement in great detail. While it is advisable to hold high expectations for students in reading, it is also important that these expectations are realistic in terms of diagnostic information collected on students. High performance expectations that are consistently impossible for students to reach will erode student effort.

On the other hand, teachers' expectations may not affect individual

students. Some students are not as susceptible to teachers' expectations as others. However, when low expectations do have negative effects on students, the result can be devastating to student growth, as seen in this summary of the effects of low expectations communicated to students (Good & Brophy, 1987):

- receive less instruction and are expected to do less work
- receive less frequent praise
- are called on less often, receive less time to respond to questions, and are asked predominantly factual questions
- are seated farther from their teachers, receive less eye contact, and are smiled at less often
- are criticized more frequently for incorrect responses
- receive less help in difficult situations
- receive less acceptance and use of ideas.

One of the primary results of low expectations, then, is that students are excluded from the teaching-learning process. These students are not called on to answer questions and rarely volunteer information during a lesson.

SELF-MONITORING PROCESS

With the current focus on empowering teachers, which places emphasis on teacher decision making, it is imperative that all teachers, especially teachers-in-training, are made aware of the possible effects of low teacher expectations on student performance in reading and reflect on ways to monitor their instruction in this important area. One method to help teachers view reality in their classrooms (in this case whether or not certain students are included in class discussions) is to engage teachers in a self-monitoring process (Blair, 1988). The self-monitoring process involves collecting and examining data on one's effectiveness. This process is facilitated by having a colleague or supervisor systematically observe classroom events and provide feedback on one's teaching. Once information is collected, a teacher is in a position to reflect on the information and discuss perceptions with fellow teachers and supervisors. This process creates an awareness of strengths and weaknesses in an instructional program and points to modifications and improvements. Figure 1 depicts the self-monitoring process.

METHOD

To encourage teachers-in-training to examine teacher expectations and the relationship between expectations and student participation in class discussions, 10 grade 3 teachers-in-training were observed during their student teaching experience and also participated in a self-monitoring process. The university student teaching supervisor observed each student

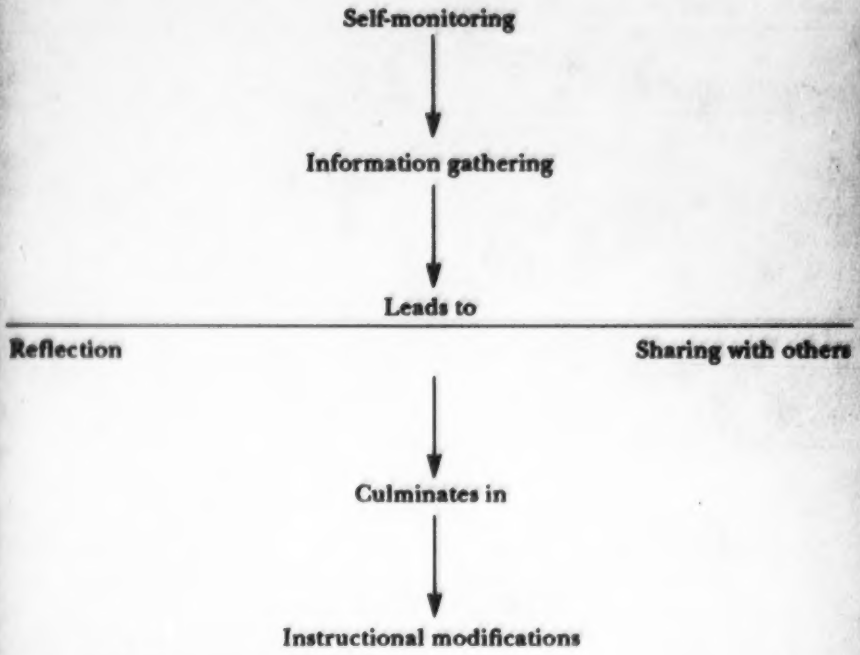

Figure 1. Self-monitoring process.

teacher leading a discussion of a story following silent reading. Using a blocked seating chart, the supervisor completed a participation guide on the lesson. The supervisor placed a check mark in the appropriate block if a question was directed to the student and a plus sign in the block if the student volunteered a response. Following the lesson, the university supervisor met privately with each student teacher to examine the results of the participation guide and with the student teacher and the cooperating teacher to plan strategies for including all students in subsequent discussions.

RESULTS AND DISCUSSION

The completion of a participation guide on each person yielded the number of students who were involved in the lesson and the identification of those children who were not involved at all in the lesson. Across the 10 student teacher observations, 80.9% of the third-grade students participated in the lessons (see Table 1).

TABLE 1
Reading Lesson Participation Summary

Student teacher	Total number students	Number participating	Percentage participating
A	21	13	61.9
B	19	15	71.4
C	18	16	88.8
D	18	16	88.8
E	22	18	81.8
F	18	15	83.3
G	21	13	61.9
H	23	21	91.3
I	18	16	88.8
J	16	14	87.5
Totals	194	157	80.9

As stated, following each observation, the university supervisor conferred with each student teacher individually and reviewed the results of the participation guide. In an effort to help student teachers reflect on the results of the participation guide, the supervisor led a discussion by asking the following questions:

1. Which students were asked more questions? Why?
2. Were there particular groups of students sitting together that received more attention? Why?
3. Which students volunteered readily in class discussions?
4. Which students did not respond in class?
5. Why do you think they did not respond?

Student teacher responses demonstrated a growing understanding of the teaching process and a greater awareness of its subtleties and complexities. The following are examples of responses to the above questions:

I usually call on Anglo males and females as well as some Black males who have their hands raised more often. Some of them need extra practice... others were called on to "help out" those who didn't know an answer.... High level students are frequently on task.... I usually stand close to their tables because they usually are on task and I expect correct answers. I tend to call on them [higher level students].... I just realized that I am calling on the boys more than girls and maybe that is why the girls don't volunteer as much.... The high ability groups were asked questions most often because the low groups take longer in understanding.... I guess I usually call on students who sit close to each other at one time.... Jennifer is so quiet and often forgotten about.

This pilot study was concerned with the process of self-monitoring and as such did not include the formal completion of a second participation guide to measure progress. Simply being aware of a potential problem area does not necessarily translate into positive changes. However, informal discussions with both student teachers and their cooperating teachers were encouraging. Once aware of an area needing improvement, student teachers seemed eager to devise ways to include all students in discussions and not fall prey to the familiar trap of asking only certain students to answer discussion questions. Because of the initial success of the self-monitoring process in this pilot study, we recommend that this method of changing teacher behavior be tested empirically to determine its significance.

This process of self-monitoring to gain a "snapshot" of one's own teaching is related directly to the premise that the teaching act be both purposeful and reflective. Since teacher expectations can be communicated through classroom interactions, checking to make sure all students participate in discussions is one means of exploring expectations.

Teachers-in-training should be aware of the power of their expectations on children, and they should be able to change their actions to ensure that all students receive instruction to meet their needs. To this end, teachers need to be trained to be reflective, self-monitoring professionals. Effective teachers think constantly about what happens in their classrooms; they monitor their own actions and they devise activities that are responsive to their students. Self-monitors reflect about their teaching and ask "Why am I doing what I am doing?" The argument presented in this paper is that teachers-in-training need to be careful observers of their classroom teaching and to monitor how their expectations are manifested during reading instruction. Most of all, it suggests that attention be paid to the quality of classroom experiences provided to students during reading instruction.

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Preparing Teacher/Researchers

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A major goal of educators who prepare teachers at the preservice or inservice level is to increase their instructional effectiveness and, in turn, children's learning. While this may seem to be a modest goal, particularly since it can be articulated in one sentence, it is a goal full of opportunities for teacher preparation and graduate education programs. Certainly, embedded in our desire to help children learn is an awareness of the demographics of the schools of tomorrow. In 1982, almost one-sixth of public school students were from poor families, one-tenth were handicapped in some way, and over one-fourth were from minority groups (Haberman, 1984). These proportions are up from the previous decade and, should the current trend continue, they suggest an increase in the numbers of youngsters who will fail in school. Given these demographics, the need for skilled, sensitive, and reflective teachers to improve instructional effectiveness is certainly acute.

Educators are also aware of the variety of arguments about what positions, orientation, and strategies should help teachers increase students' academic success (Berliner, 1986; Carnegie Task Force, 1986; Gage, 1978; Holmes Group, 1986; Shulman, 1987). These arguments range from Shulman's notion that teaching emphasizes comprehension and reasoning as well as transformation and reflection to the national certification efforts of the Carnegie Foundation. Most educators, however, agree that when teachers have a spirit of inquiry, are able to reflect thoughtfully on their classrooms and students, and are empowered to be decision makers in the instructional

process, significant improvement in student learning is more likely to occur within schools.

A spirit of inquiry, or reflection, can be characterized by teachers' (or anyone's) dissatisfaction with a current situation and the thoughtful identification of what is unacceptable, curiosity about a classroom or student learning phenomenon, or concern about past and current policies/relations in schools. Whatever the problem, teachers with a spirit of inquiry will ask questions about what is happening with the children they teach and have a sense of empowerment to make whatever changes are needed to improve learning for children. It is this willingness to problem solve, to question, to look for answers, and to make changes that characterizes a teacher/researcher. Indeed, the whole notion of teacher/researchers who have an intellectual curiosity and energy about their students and classrooms is one manifestation of teacher inquiry.

Teacher/researchers engage in action research. *Action research*, a term coined in the 1940s by Collier (1945), is concerned with immediate solutions to and understanding of local problems. Although action research is often associated with classroom studies that are quantitative in nature, it can assume a qualitative design as well. Teachers should be encouraged to use either or both designs, depending upon the questions for which they seek answers.

The purpose of this paper is to identify problems in the preparation of teacher/researchers at the preservice and graduate levels and to describe some experiences we, as teacher educators, can provide our students that encourage reflective teaching and classroom research.

PRESERVICE AND INSERVICE TEACHER/RESEARCHERS

A significant difference exists between preservice and inservice teachers in their background of teaching experiences. Preservice teachers have limited, if any, teaching experiences to relate to new knowledge presented in university courses. The experiences they do have are usually controlled clinical or field experiences that are part of a planned teacher education program. Another manifestation of meager teaching experiences is that preservice teachers ask few and often naive questions. Preservice teachers, however, are eager, enthusiastic, and idealistic. They are open to ideas and have established no set teaching patterns. Even though few classroom experiences also means a paucity of experiences upon which to reflect, these students offer us opportunities to foster inquiry and encourage their development as teacher/researchers.

On the other hand, inservice teachers ordinarily have many and varied classroom experiences to share and to which they can relate new information. This wealth of experience allows them to ask practical and sophisticated questions about children and learning. Furthermore, they are usually at a more mature level of development as teachers. Unfortunately, despite (or perhaps because of) their experiences, inservice teachers may be

indifferent, burned out, and even jaundiced in their beliefs about teaching. Since they usually have set teaching patterns, they may see no need to alter their classroom practices or teaching beliefs. Certainly, these teachers provide us different sorts of opportunities to encourage problem solving and to help them develop as teacher/researchers.

ASSIGNMENTS FOR PRESERVICE TEACHERS

Assignments that consider the strengths and needs of preservice teachers and that guide reflective teachers who are initiates as teacher/researchers can occur in several contexts, such as early field experiences, on-campus reading practicums, and student teaching. Assignments should contain specific directions and guidelines to help these novice teachers problem solve. In other words, assignments need to be structured. They should reflect the instructor's awareness that preservice teachers must work in collaboration with schools and/or campus-based supervisors. Assignments should also be made with some degree of instructor tolerance because these students are so inexperienced and are often focused on their course grade. Assignments are made to encourage reflective thinking, not primarily to address children's reading problems, although students benefit from the dual objectives. Some assignments requiring reflective thinking and teacher research that we provide preservice teachers in early field experiences, on-campus reading practicums, and student teaching follow.

Early Field Experiences

Assignment No. 1. Conduct a case study of a child in your classroom who is at risk because of reading problems (possibly identifying words, understanding vocabulary terms, comprehending the text, or reading orally fluently). Collaborate with the teacher to identify a child and to determine the problem and possible causes of it. Secure parental permission to work with the child. Formulate questions to answer in order to better understand the child's reading problems. Study the literature in the area of the child's difficulty. Study school records and then interview parents and school professionals working with the child. Observe the child in reading and nonreading situations and take notes. Organize and reflect upon the information you have gathered and discuss the information with the teacher. Speculate on possible solutions to the problem. Prepare a case study that delineates the problem, summarizes the literature, presents the data gathered, draws conclusions, and answers the questions you and the teacher posed. Your case study should be five to six pages long and have a reference list attached.

Assignment No. 2. Conduct a study of a classroom problem in some reading/language arts area (e.g., reading, spelling, oral language, listening skill, composing ability). Collaborate with the teacher to identify the problem and formulate questions about the problem. Study the literature in

the problem area. Collect data — samples of student work/behaviors (e.g., oral language samples, written language samples, oral reading miscues, student response to various types of questions). Organize and reflect upon the information you have gathered and discuss the information with the teacher. Speculate on solutions to the problem. Prepare a paper that delineates the problem, summarizes the literature, presents data gathered, draws conclusions, and answers the questions you and the teacher posed. Your paper should be six to seven pages long and have a reference list attached.

Assignment No. 3. Study the theoretical bases of classroom reading instruction. Review articles and class notes on the major theoretical positions. Interview the teacher regarding his or her beliefs about the nature of the reading process and the process of learning to read; use an interview format given in class (Leu & Kinzer, 1987; Gove, 1983). Interview eight students — four good readers and four poor readers—regarding their views of the purpose of reading materials and assignments given; use the format given in class (Wixson, Bosky, Yochum, & Alvermann, 1984). Observe classroom reading instruction for two hours (if students are grouped, observe a group of good readers and a group of poor readers) and take notes. Prepare a paper that briefly summarizes the major theoretical positions; summarizes the data gathered; identifies problem/conflict areas; compares and contrasts teacher beliefs with their instructional behaviors and teacher beliefs with student views; and finally relates teacher beliefs, instructional behaviors, and student views to the identified problems and theoretical positions studied. Your paper should be six to seven pages long and have a reference list attached.

On-Campus Reading Practicums

Assignment No. 1. Conduct an initial assessment and prepare a diagnostic report. Administer an IRI, collect written and oral language samples, and administer an interest inventory and reader self-evaluation. Study the child's folder, paying special attention to information supplied by the family and teachers about the child's reading/language arts strengths and needs. Write a three- to four-page diagnostic report that summarizes the data gathered, draws conclusions about student strengths and needs, establishes three or four instructional objectives, and makes hypotheses about methods and materials that might help the child meet the objectives; attach a reference list.

Assignment No. 2. Plan to conduct three diagnostic lessons after collaborating with the instructor to select one area of student need to study. Conduct the three diagnostic lessons and reflect on the effects of three different strategies designed to improve ability in the area of need under study. Use the diagnostic lesson frameworks and record-keeping procedures outlined in Tierney, Readence, and Dishner (1985) or Walker (1988). Prepare a two- to three-page paper that presents your procedures for the diagnostic

lessons, summarizes the results of each, and draws conclusions about the effectiveness of each strategy for your student. Attach a reference list.

Assignment No. 3. Keep a tutoring log (adapted from Patterson, 1988) and prepare a remediation report. The log will contain your plans for each session, your observations of the child's responses, and your subsequent decisions about further instruction. At the end of the practicum experience, write a four- to five-page remediation report, based on data from the tutoring log and diagnostic lessons, that summarizes the child's progress toward each objective and makes recommendations about future instruction; attach a reference list.

Student Teaching

Student teachers can study their own theoretical views of reading instruction. Instructors can interview them regarding their beliefs about the reading process and the process of learning to read before they begin teaching. Student teachers can then interview children in each other's reading groups and videotape each other teaching good and poor readers. The student teachers can then reflect on their prestudent teaching reading beliefs, if student teaching influenced those beliefs, and whether the classroom teachers' practices were compatible with their beliefs and/or the children's beliefs. Finally, they can write a paper that considers their reflections on their reading instruction beliefs.

We find that most assignments for inservice teachers can be adapted for preservice teachers to complete during their student teaching semester. We also find that many of the assignments listed above can be adapted for inservice teachers. For example, the study of a classroom reading/language arts problem can be adapted to add making hypotheses about methods and materials to solve the problem, testing the hypotheses, and reporting the results. The diagnostic lesson assignment can be adapted to involve conducting diagnostic lessons with a group and reporting the results.

ASSIGNMENTS FOR INSERVICE TEACHERS

In many ways, inservice teachers enrolled in graduate school are good candidates for the teacher/researcher movement. In our experience, they are intrigued with "conducting research" but somewhat fearful of being "researchers." They need support and encouragement in their endeavors. A convenient classroom facilitates exploring the role of teacher/researcher. Often inservice teachers have already identified problems in their classrooms but have not articulated them.

Small group discussions that provide a sharper focus on the problems are helpful. As soon as a teacher has an identified problem, he or she must determine how to systematically research it. For instance, should the teacher conduct a quasiexperimental/quantitative study or a naturalistic/qualitative study? We generally make one of two assignments to develop

teacher/researchers at the inservice level: one that encourages a qualitative study and one that produces a quantitative study.

Assignment No. 1. Consider the children, learning processes, or curriculum in your classroom. For the next class period, identify problems in one, two, or several areas that are troublesome to you as the teacher. At that time, we will form small groups to discuss and more sharply focus the identified problems. You must select one problem to study/research in depth. After you have selected the problem, begin keeping a log. For instance, if a child interests you, systematically observe the child in learning situations and record your observations. Note the context, the task, the materials, and the child's behaviors as he or she acquires new skills or information. Begin to note which of the above variables seem to be the most troublesome for this child. Alter the variable and observe the results. Collect examples of the child's work with a representative sample of contexts, tasks, and materials. Study the child's school records. Review related and pertinent literature. Interview the child's previous teachers. Begin to consider possible causes of the problem. Consider and reflect on your observations, data, and outside information. Speculate on possible solutions to the problem and reflect on your growth as a teacher/researcher. Prepare a paper that examines the teacher/researcher process, your study of the problem, and your conclusions. Be prepared to share your research at the research seminar.

Assignment No. 2.

Select and define a problem. A problem is a hypothesis or question that interests you and that can be tested or answered through the collection and analysis of data. State your problem in question form or as a declarative statement. Be sure to limit the problem so that some conclusions are possible. For instance, if you are concerned about your children's mastery of the content of the social studies textbook, your question might evolve from "How can I help my children read their social studies textbook?" to "What prereading strategies would help my children understand the content in the social studies book?" to "Is an Expectation Outline (Spiegal, 1981) an effective strategy to help the children in my classroom master the content in the social studies textbook?" You will need to review the existing literature related to the identified question or problem because you need some degree of understanding of what is known or still unknown about the problem.

Design the study. Randomly divide your students into two groups. Design a social studies lesson using an Expectation Outline and a lesson that is taught as you usually teach. Teach the Expectation Outline lesson to one group and the regular lesson to the other group. The next day give an unannounced test over the material.

Analyze the data. Score the tests and determine the average score for each group. Prepare a graph that shows each group's average score. Prepare a frequency distribution (or tallies) for the number of students that earned each score.

Draw conclusions from the data. Your conclusions are based on the results of your data analysis. They should be stated in relation to the original question. As a teacher/researcher, summarize what has been done and draw inferences from what you found. Remember that your results are valid only in your classroom. You cannot generalize to other children or other classrooms. Prepare a paper that follows the above steps. Be prepared to share your research at the research seminar.

Both assignments are open enough to accommodate any topic or area on which we want to focus. Another assignment we have used is described by Moore and Moore (1985) in which students create a minireplication of a study already conducted. We use these assignments in content reading courses, diagnosis and remediation courses, elementary reading courses, language arts courses, and exceptional children's reading problems courses. In sum, the assignments can be modified to fit any course.

The research seminar is a very important aspect of our teacher/researcher preparation. At the seminar, each student presents his or her research, and the group discusses the question, the procedure, the data collection and analysis, and the results. We also try to have a research project of our own to share at the seminar so that we can create a collegial context. It is exciting to watch teachers become so engrossed in the research process that they participate in lively discussions about what they want to research next. When that happens, we know that we have a new group of research colleagues in the schools.

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Student Teacher Use of Content Reading Strategies

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Content reading courses for secondary preservice teachers are required in more than 60% of the states (Farrell & Cirrincione, 1984). These teacher certification requirements were enacted with the hope that new content area teachers would develop the skills to help students learn from difficult secondary textbooks. It is unclear, however, whether content reading courses effectively convince preservice secondary teachers to use content reading strategies when they begin teaching.

Much of the research on content reading courses has focused on students' attitudes. Professors often hear complaints from students who do not understand the purpose of the course. This "bad attitude" seems to go beyond the general discontent sometimes expressed by college students taking required education courses. It may reflect a gap between the philosophy expressed in the course and the culture of the traditional secondary school.

Why do some students have poor attitudes even before the course begins? Stewart and O'Brien (1989) found that only 23% of entering students had a clear idea of the purpose of the course, while 39% believed the state required it for their personal reading remediation.

Welle (1981) found that students from fields that traditionally make little use of texts (i.e., physical education and art) are resistant. However, even teachers in disciplines that traditionally require reading (i.e., social studies, science, and English) may expect students to learn almost exclusively from

class lectures and discussions rather than from texts. Ratekin, Simpson, Alvermann, and Dishner (1985) found that less than 1% of the home assignments given by high school teachers expected students to "develop concepts from text."

O'Brien (1988) suggests that preservice teachers may already be aware that many high school cultures stress lectures and discussions, not reading. They may be resistant to the course because it is perceived as full of "ivory tower" ideas that cannot be applied in the "real world."

It has been found repeatedly, however, that content reading courses can persuade preservice teachers that content reading strategies are valuable (Allen, 1982; Bader & Pearce, 1983; Dillingofski & Dulin, 1979; Gehrke, Schaefer, & Schlick, 1982; Lloyd, 1987; Memory, 1983; Orlando, 1983; Welle, 1981). When and under what conditions does this improved attitude translate into use of the strategies when teaching?

Only a few researchers have studied the actual use of strategies learned in a preservice content reading course. Most studies have examined course structures that promote use of the strategies. For example, timing the course just prior to the internship or student teaching has been found to be helpful (Allen, 1982; Bader & Pearce, 1983). Requiring students to use strategies for their own learning or in a field experience also is valuable (Memory, 1983; Olson & Gillis, 1983).

But what about the school *culture* that preservice teachers encounter as student teachers or beginning teachers? If preservice teachers' attitudes toward content reading improve as a result of the content reading course, will they be able to put their newly found beliefs into practice in the reality of the secondary school?

The purpose of this study was to examine whether secondary student teachers used the strategies that they were taught in a content reading course. We also examined whether student teachers found particular strategies to be more useful in different content areas and if cooperating teachers' knowledge of content reading strategies was related to student teachers' use of the strategies.

METHOD

Subjects were secondary student teachers at a public midwestern urban university. They were about evenly divided between college seniors and postgraduates who had returned to college for teaching certification. All 48 secondary student teachers during one spring quarter were sent surveys; 12 males and 11 females (48%) responded. The age range of the respondents was 22 to 40 with a mean age of 28. Their student-teaching assignments were in both suburban and urban secondary schools.

Surveys were distributed to students by university supervisors during the student teaching seminars. In most instances, students were grouped in the seminars according to content area. Two groups, the physical

education and the science majors, had only one respondent each. Because it would be impossible to generalize for those disciplines based on only one survey each, those two responses were not considered in the analysis.

All subjects had taken, within a year prior to their student teaching experience, a four-credit course in secondary content reading methods. The course emphasized the theory behind and the use of strategies to help secondary students learn from text. The underlying philosophy of the course was to help preservice teachers develop skills to integrate reading strategies with course content in order to improve learning. Strategies addressed in the course were taken from *Content Area Reading* (Vacca & Vacca, 1989) and *Reading Strategies and Practices* (Tierney, Readence, & Dishner, 1985). An important component of the course was a concurrent field experience in a public school classroom (two hours per week) where the preservice teachers practiced the strategies learned in class.

Cooperating teachers to whom the student teachers were assigned had been selected by local school district administrators. These teachers had been identified as master teachers who would serve as good role models and mentors for the student teachers. The school district administrators worked closely with the Office of Field Services at the university to ensure that the most qualified cooperating teachers were chosen.

For this preliminary study, student teachers completed a questionnaire at the end of their student teaching experience. Sixteen text-based, six study skills/research, and seven vocabulary strategies were listed, all of which had been taught and subsequently practiced by students taking the content area reading course. Additional questions addressed the teaching environment, the attitudes of cooperating teachers and student teachers toward content area reading strategies, and the experience level of the cooperating teachers. The student teachers indicated whether each content area reading strategy taught in the preservice methods course was used frequently (weekly or twice a month), sometimes (once a month), seldom (less than once a month), or never.

RESULTS

Some of the content reading strategies were used much more frequently than others. Forty-three percent of the student teachers surveyed reported using advance organizers sometimes or frequently. Other popular text-based strategies and the percentage of students who reported using them sometimes or frequently are as follows: DRTA, 38%; structured overviews, 33%; and semantic mapping, 29%. The most popular study skills strategy was the Notetaking System for Learning, 24%. Several vocabulary strategies were used by student teachers frequently or sometimes. They included contextual analysis and dictionary skills, 33%, and structural analysis and contextual redefinition, 24%.

The percentage of strategies used by student teachers in each discipline varied. English majors used 30% of the strategies once a month or more; Spanish, 25%; art, 15%; business, 11%, and social studies, 11%.

A difference in the use of strategies also was found between student teachers whose cooperating teachers were familiar with the strategies and those who were not familiar with the strategies. Only 4 of the 23 student teachers reported that their cooperating teachers were familiar with content reading strategies. These student teachers also reported using the strategies more often in the classroom. Student teachers whose cooperating teachers did not use textbooks reported less use of content reading strategies.

DISCUSSION

It should be noted that problems with self-reporting the use of content reading strategies (Alvermann & Swafford, 1989) may tend to inflate reported use of the strategies. Further research, including interviews, observations, and document analysis, is warranted. Nonetheless, the results of this preliminary study suggest that only a limited number of strategies learned in the preservice course were later used during student teaching. Of 29 reading strategies taught, only 7 were used once a month or more by more than 20% of the student teachers, and none was used by more than 43% of the student teachers. Strategies were used much more often by student teachers in some subjects than in others. Reasons for these differences cannot be determined by this study. Variables such as the differential use of textbooks, the amount of reading material assigned, and the philosophy and knowledge of the cooperating teacher in relation to content area reading strategies should be explored. In particular, the cooperating teacher's knowledge of content reading strategies appears to be related to student teacher use of the strategies.

Eighty-one percent of the student teachers in this study reported that their cooperating teachers were unfamiliar with content reading strategies. However, it is likely that these cooperating teachers had been exposed to these ideas through inservice or preservice education. The state in which this study was conducted requires all preservice teachers to take a course in content reading, and many districts have offered inservice programs as well. Reading educators, however, report that many teachers who learn content reading strategies in preservice and inservice programs never use them in the classrooms (Vacca & Gove, 1982; Dupuis, Askov, & Lee, 1979).

Several researchers have suggested reasons why content reading strategies are used infrequently in secondary schools. Ratekin et al. (1985) observed 40 secondary school class sessions and compared methods observed with those suggested in content area reading methods textbooks. They found that textbooks advocate strategies that require high degrees of student interaction usually found in small group instruction. The eight teachers in their study, however, relied almost exclusively on whole class instruction.

Another significant observation was that the teacher, not the text, was viewed as the primary source of information.

Cooperating teachers may believe that constraints in the secondary school, part of the culture as O'Brien (1988) suggests, prevent the use of content reading strategies. These barriers may include time restrictions, content-coverage requirements, lack of good texts, belief in the efficiency of lecture, and strong discipline-based beliefs that dictate acceptable instructional practice. Cooperating teachers who believe content reading strategies are impractical and unnecessary are not likely to model them for student teachers or sanction their use.

A new dialogue among secondary teachers, administrators, university professors, and researchers is necessary. Teams representing these groups should review educational goals for secondary students and discuss ways literacy activities can be included in every content area. The literacy of secondary school students will improve only if professionals at all levels work together for practical and imaginative curriculum changes.

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Literature Study Groups in a University Methods Class

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As teacher educators, we are always looking for ways to improve the teaching performance of the students enrolled in our classes. We want them to understand the processes of reading and writing from the inside out, to become aware of themselves as literate individuals who are capable of helping others become literate. Students enrolled in graduate and undergraduate methods of teaching reading classes have already learned to read and write and can use this knowledge effectively in their daily lives. Teacher educators must enable students to make this tacit knowledge visible if students are to understand how literacy is learned and to apply this knowledge to their teaching.

Reading is a transactional process, an event shaped by the reader, the text, and the context (Holland, 1985; Probst, 1988; Rosenblatt, 1978). Readers bring to the text their own unique set of life experiences, the events they have lived through, their values and beliefs, their literary histories. Literary conventions reflected in the author's style or the text genre are also critical in shaping readers' responses. The third component in the transaction is the social context, the setting in which the reading event occurs.

Instruction in many elementary or college classrooms does not recognize these relationships. Reading and writing are taught as sets of skills that must be isolated, practiced, and recombined to ensure mastery (DeFord, 1985). With a skills-oriented view of literacy, the tacit understanding of literacy is lost. Teachers focusing on the skills of literacy no longer focus on the aesthetic joy of reading and writing; teaching becomes a technical skill, and teachers become information dispensers instead of fellow learners.

STUDYING LITERATURE STUDY GROUPS IN THE UNIVERSITY CLASSROOM

The purpose of this study was to find ways to incorporate a transactional view of reading into a graduate-level methods of teaching reading class. One class participated in six literature study groups that focused on the following texts:

Poems:

Robert Frost, "It Bids Pretty Fair"
Wallace Stevens, "A Postcard From the Volcano"

Short Stories:

Merimee, "Mateo Falcone"
Truman Capote, "A Lamp in a Window"

Novels:

Katherine Paterson, *The Great Gilly Hopkins*
Theodore Taylor, *The Cay*

Research questions included: What happens when students meet together in literature study groups? What will the dialogue reveal about their responses to the pieces that were read? Will students make connections between these discussions and their own teaching situations?

Data consisted of audiotapes and transcripts of the discussion groups, response journals kept by the students, and comments made during class discussions; data were analyzed using analytic induction (Bogdan & Biklen, 1982). As categories emerged, they were compared and contrasted with previous and subsequent categories for the purpose of identifying general patterns in the data.

Four general areas emerged: (1) the types of responses made in the literature study groups: constructing simple meaning, personal involvement, shared inquiry, critique, analysis of reading strategies, and application to teaching; (2) similarities and differences between comments made during discussions and comments recorded in the response journals; (3) critiques of the literature study groups: what was learned, how the groups changed, how participants felt about the groups; and (4) the influence of the text on the discussion. This paper will discuss the types of responses made in the groups and give examples of each.

THE PRACTICE OF LITERATURE STUDY GROUPS

Literature study groups are groups in which five or six students read and discuss a common text (Eeds & Wells, 1989; Galda, 1983; Golden, 1986; Marshall, 1988). The emphasis is on shared inquiry, discussions in which individual interpretations are shared and new meanings may emerge. The "skills" of reading are used as readers discuss their interpretations. They comment on the background needed to understand a text, muse over unusual or unknown vocabulary, tell of the reading strategies used to

construct or regain meaning, read sections of the text aloud, and generally demonstrate their comprehension of what they have read.

Before the first literature study group met, I assigned a text (this was done in order to provide multiple copies of the text) and explained the transactional theory of reading and its relation to reading instruction. The students were then told they were going to read the text, reflect, write down their reaction and interpretation of the text in the form of a response journal entry, and then meet in small groups to discuss what they had read and written. The students' reactions were not unexpected. Many groaned and rolled their eyes. Other muttered about how they hated poetry or literature. Others just looked bored.

The next day when the groups met, I eavesdropped on the discussion groups and heard many students ask, "What does she want us to do?" Other comments ranged from reactions such as "I didn't understand this" to unusual and unexpected interpretations of the text. When the discussions ended, the students wrote down their interpretations of how the group went. Journal topics included comments about the group's interactions, examples of how text interpretations changed or remained the same, and suggestions for how the practice could be used in another classroom setting. The entire class then met to analyze what happened in the groups. We discussed the varied interpretations to the text, the group processes, the types of comments made, and the way the discussion flowed. The types of comments were similar to those found in a study by Eeds and Wells (1989) that examined the responses of fifth and sixth graders in literature study groups.

The following examples come from the discussion of two short stories, "Mateo Falcone" by Prosper Merimee and "A Lamp in a Window" by Truman Capote. "Mateo Falcone," written during the 19th century, tells of a family living on the maquis in Portugal. When the only son betrays the community's code of honor, Mateo Falcone does the only thing honor will allow him to do—he kills the son.

"A Lamp in a Window" is the story of a man stranded one night on a country road. He walks up to a house where an elderly lady lives alone with her cats. She has no telephone but invites the man to spend the night and go to a nearby store in the morning. They talk for hours, about literature and about life. The man notices a new freezer in the otherwise aging house and the woman opens it to reveal the bodies of cats, "All my old friends.... It's just that I couldn't bear to lose them. Completely.... I guess you think I'm a bit dotty.' A bit dotty.... But radiant: a lamp in a window" (Capote, 1980, p. 20).

RESPONSE TYPES IN THE GROUPS

Constructing Simple Meaning

Students were initially hesitant about sharing their interpretations, but once the discussion got going, the hesitancy disappeared. They argued about

parts of the text that were unclear. They asked each other about unknown words or phrases. They supported their interpretations by referring to or reading aloud from the text. In general, they created literal meaning from the text they read. An example from "A Lamp in a Window:"

Winnie: .... By the way, how many thought it was a man she let in?

Lisa: I did.

Ellen: They called him a "young boy"—

Winnie: Where did it say that? I looked back in the story 'cause I too thought it was a man but I can't find out why I thought that.

(Pages turn)

Ellen: Well here it says, it's not really referring to him, but it says [she reads from page 19], "What an exceptional experience—to be an old woman living alone here in the wilderness and have a stranger knock on your door in the middle of the night and not only open it but warmly welcome him inside and offer him shelter."

Personal Involvement

When I asked if the discussion stayed on the topic and always related directly to the text, many students gave a sheepish grin. They admitted that they often talked about themselves and their experiences, reminiscences inspired by the text. Students viewed this as a negative aspect of the discussion group, as off-task behavior. I emphasized the importance of personal involvement for people who are truly literate. Only those who find a connection between their lives and what they read continue to use reading as a lifelong pursuit.

Shared Inquiry

A text is never complete; the reader must always make inferences and fill in the gaps left by the author. Students read between the lines and beyond the text to understand what they read. In the literature study groups, readers developed a deeper understanding of the text by hearing the different analyses of others and perhaps revised their own. An excerpt from Donna's journal entry about the discussion of "A Lamp in a Window" illustrates this finding:

I feel more comfortable with the group. I'd not thought to take this story more seriously or compare the character with anyone I've known. I respect everyone else's opinion, but I still can't see a deeper meaning in this story. Other than helping this stranger in a time of need and being well versed in literature, how was she "A Lamp in a Window"? What enlightenment did she share?

Critique

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Dialogue in the discussion groups went beyond literal and inferential comprehension; students analyzed how the author constructed the text. The readers critiqued the author's mastery of the writing craft. They analyzed

(among other things) the way the plot was developed, the types of characters in the text, and the author's style and use of language. This level of analysis is always hoped for and naturally emerged through dialogue. An excerpt from Winnie's response journal entry from "A Lamp in the Window" shows this tendency:

There was a lot of use of intertextuality in the piece (new word—I just had to use it!). Also a lot of attention was paid to building the character and creating the setting.

Analysis of Reading Strategies

Unlike the fifth and sixth graders in the earlier study (Eeds & Wells, 1989), the adult students discussed how they read a text. Here is an example from a discussion of "Mateo Falcone":

Ellen: I don't think I was ever so upset after I read a story. I just, I sat down on my bed and I read it. I had trouble getting into it. I don't know why but I think it was just, it was confusing and I had to keep going back and getting all these words right, you know. And then I just got done and I, I just couldn't believe it. I was shocked.

IMPLICATIONS

Through participation in literature study groups and through analysis of the discussion groups, participants developed a deeper understanding of what they do naturally as literate people. Through dialogue, readers expanded their own understanding of the text, themselves, and the world around them. They discovered a deeper, more critical understanding of literature and perhaps life.

Participants related their learning experiences to their own classrooms and began to recognize the importance of a transactional view of teaching and learning. This knowledge can help inform their teaching by demonstrating the importance of discussion, not interrogation. Readers are capable of discussing and analyzing a text without relying on predetermined (and possibly insignificant) teacher-directed questions. Through authentic dialogue, a community of learners in which literacy is valued as an important lifelong pursuit, not as a set of skills to be learned and practiced only in a school setting, can develop.

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A Comparison of Ratings of Student Performance by Supervising Teachers, Reading Specialists, and Preservice Teachers

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Field experiences that require preservice teachers to observe in classrooms and participate in teaching lessons have become prevalent in teacher education preparation. Specific standards by the National Association of State Directors of Teacher Education and Certification (NASDTEC, 1986) used to evaluate programs require early field experiences prior to student teaching. Traditionally, field experiences are a part of methods courses taught by college professors. However, classroom teachers usually evaluate the students' performance in the field experience. Occasionally, students also evaluate their own performance.

A review of the literature, including a recent ERIC search, revealed very few studies pertaining to the simultaneous evaluation of preservice teachers' performance by college supervisors, supervising teachers, content specialists, and the students themselves (Hattie, Olphert, & Cole, 1982; Irvine, 1983; Wheeler & Knoop, 1982). In addition, 1982-89 issues of IRA's *Summary of Investigations Related to Reading* contain no studies specifically related to the evaluation of field experiences in reading methods courses.

Briggs, Richardson, and Sefzik (1985) compared supervising teacher ratings and student teacher self-ratings of elementary student teaching performance to determine if there were significant differences between them. The two groups evaluated the performance of student teachers by completing a Likert scale rating on five major competency areas assumed to be essential for success. Although evaluations were similar in the five

competency areas, the student teachers evaluated themselves more highly than their supervising teachers.

Irvine (1983) investigated "the relationship between preservice and supervisory teachers' reports of preservice teachers' classroom behavior after completion of a specific training program designed to facilitate self-assessment skills and collegial relationships" (p. 25). Using Georgia's Teacher Performance Assessment Instruments (TPAI), the preservice and supervising teachers evaluated the preservice teachers' performance in 14 competency areas. The findings indicated that "preservice teacher self-ratings of their performance moderately agree with the independent ratings of their supervising teachers" (p. 30).

Wheeler and Knoop (1982) studied "the appraisal of student teaching performance among academic supervisors, field supervisors, and self-ratings" (p. 178). The findings indicated that the evaluations of the college and field supervisors correlated highly, but preservice teachers rated themselves significantly higher in most categories than their supervisors.

Evaluating student performance in reading is important because it helps to improve student proficiency in effective use of reading strategies. Evaluating student performance also helps determine consistency between what is taught in the reading methods course and what the field supervisors and reading teachers expect. Therefore, the purpose of this study was to compare the evaluations of junior and senior preservice teachers, supervising teachers and reading specialists who observed student performance using a modification of the Directed Reading-Thinking Activity (DRTA). In addition, the study investigated whether there was a difference between the evaluations of primary and intermediate supervising teachers.

METHOD

Four groups of subjects participated in the study. The first group consisted of 12 elementary education juniors who had just completed a methods course in reading. The second group of students was made up of 18 elementary education seniors who had completed student teaching. Thirteen supervising teachers (seven from the primary grades and six from the intermediate grades) composed the third group. The fourth group contained 28 reading specialists, all of whom had master's degrees. All students attended the same college; the teachers and specialists were employed by the school districts in which the students had their field experiences and student teaching assignments.

The instrument used to evaluate student performance consisted of nine categories, three of which related to teaching in general (closure, follow-up activity, classroom management) and six that directly pertained to the modification of the DRTA (introduction to lesson, vocabulary development, reading for a purpose, discussion, reading to support predictions, and

questioning). Content validity of the instrument was verified by a team of reading experts.

A videotape was made of a student teacher using the modification of the DRTA with a group of fifth-grade students. It was shown on separate occasions to each group of subjects who completed the evaluation form by rating the student's performance in each category using a Likert scale with 10 as "outstanding" and 1 as "needs improvement." Comments were also written under each category indicating strengths and weaknesses.

Analyses of variance (ANOVAs) were conducted across the four groups for each competency and for the global score, followed by Tukey post hoc tests, where appropriate. In addition *t* tests were performed to determine differences between the primary and intermediate supervising teachers for each variable and for the global score.

RESULTS

Descriptive data and results of the ANOVAs are presented in Table 1. Significant differences occurred across the four groups for each of the nine competencies and the global score. Tukey post hoc analyses revealed that the reading specialists consistently rated the student's performance significantly lower on all competencies and the global score. Few significant differences occurred among the other groups. The means of the juniors were significantly lower than the means of the seniors for the variables of "introduction to the lesson" and "classroom management." In addition, the means of the supervising teachers were significantly lower than those of the seniors for the variables of "closure" and "follow-up activity."

Descriptive data and *t* tests for the primary and intermediate grade supervising teachers are reported in Table 2. In each case there were no significant differences between the evaluations of the primary and intermediate grade supervising teachers.

DISCUSSION

The results of this study indicate that preservice teacher ratings of student performance on the modification of the DRTA compare favorably with those of their supervising teachers. There was agreement among the juniors, seniors, and supervising teachers for each of the six competencies that directly pertain to the modification of the DRTA. In addition, the primary and intermediate grade supervising teachers evaluated the students' performance in a similar manner.

The reading specialists, however, rated the student's performance significantly lower than the other groups on all competencies and the global score, and they were more variable in their ratings. One reason might be that by nature of their training in a specialized field, the reading specialists may be more knowledgeable and critical in evaluating performance. In

TABLE 1
Summary of Means, Standard Deviations, and Analyses of Variance for Group Ratings

Competency area	Juniors $N = 12$	Seniors $N = 18$	Supervising teachers $N = 13$	Reading specialists $N = 28$	F
Introduction to lesson					
$\bar{X}$	7.25	8.83	8.07	4.92	36.54*
SD	0.86	1.04	0.85	1.74	
Vocabulary development					
$\bar{X}$	7.75	7.61	7.00	3.67	31.20*
SD	1.28	1.53	1.41		1.86
Reading for a purpose					
$\bar{X}$	8.16	8.83	8.61	6.25	15.84
SD	1.19	1.09	0.87	1.81	
Discussion					
$\bar{X}$	7.83	8.00	7.84	5.17	16.67*
SD	1.11	1.37	0.68	2.09	
Reading to support predictions					
$\bar{X}$	8.08	8.88	8.23	5.70	22.60*
SD	0.99	0.9	0.72	1.93	
Questioning					
$\bar{X}$	7.50	7.83	7.38	3.46	41.98*
SD	0.90	1.58	1.44	1.71	
Closure					
$\bar{X}$	8.00	8.61	7.00	4.14	35.40*
SD	0.60	16.1	0.70	2.05	
Follow-up activity					
$\bar{X}$	8.00	9.05	7.30	3.1	38.68*
SD	0.73	0.96	0.75	2.40	
Classroom management					
$\bar{X}$	7.33	9.16	7.92	5.23	32.88*
SD	1.23	0.98	1.44	1.53	
Global score					
$\bar{X}$	69.91	77.05	69.38	41.04	68.55*
SD	3.84	7.69	5.18	12.13	

*$p < .0001$

short, they may have higher expectations and standards. Supervising teachers, who work on a regular basis with juniors and seniors, may be more cognizant of a beginning teacher's ability. It may also be that supervising teachers tend to be sympathetic to student teachers and therefore may not evaluate them as rigorously.

The findings of this study have implications for evaluating field experiences in reading methods courses. There was compatibility between

TABLE 2
Means, Standard Deviations, and *t* Tests for Primary and Intermediate Supervising Teachers of Student Performance Using the DRTA in Nine Competency Areas and Global Scores

Competency area	Primary ($N = 7$)	Intermediate ($N = 6$)	*t* value	*p*
Introduction to lesson				
$\bar{X}$	8.00	8.16	−0.30	*NS*
SD	1.15	0.75		
Vocabulary development				
$\bar{X}$	6.71	7.33	−0.77	*NS*
SD	1.70	1.03		
Reading for a purpose				
$\bar{X}$	8.71	8.50	0.43	*NS*
SD	0.75	1.04		
Discussion				
$\bar{X}$	7.57	8.16	−1.66	*NS*
SD	0.78	0.40		
Reading to support predictions				
$\bar{X}$	8.57	7.83	2.06	*NS*
SD	0.53	0.75		
Questioning				
$\bar{X}$	7.14	7.66	−0.63	*NS*
SD	1.86	0.81		
Closure				
$\bar{X}$	7.00	7.00	0.00	*NS*
SD	0.57	0.89		
Follow-up activity				
$\bar{X}$	7.28	7.33	−0.11	*NS*
SD	0.95	0.51		
Classroom management				
$\bar{X}$	8.42	7.33	1.42	*NS*
SD	1.27	1.40		
Global score				
$\bar{X}$	69.42	69.33	0.03	*NS*
SD	5.99	4.63		

student teachers and supervising teachers with regard to expectations for performance using the DRTA. Students should have more confidence in their evaluations as their evaluations were similar to both primary and intermediate grade supervising teachers. Future research needs to be conducted to explore differences in the reading specialists' evaluations. Such inquiry may also offer the beginnings of a developmental scoring system with expectations for preservice teachers at some point on a continuum.

Finally, videotapes of student performance can be valuable instructional tools. In subsequent methods courses the professor, after lecturing about and demonstrating a teaching strategy, could use videotape with current students to evaluate their understanding of each competency. The discussion that follows each step enables the professor to assess students' knowledge and, when necessary, reteach before field placements.

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Early Reading Assessment and Teacher Decision-Making Practices in Kindergarten

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A variety of national early childhood associations maintains that the pressure to achieve high scores on standardized tests has resulted in changes in the content of kindergarten programs (Bredekamp, 1986; International Reading Association, 1986; Moyer, Egertson, & Isenberg, 1987; National Association for the Education of Young Children, 1988). These changes, often in the form of increased demands for traditional "academic" content, do not attend to children's social, emotional, and intellectual development. At the same time, reading researchers claim that reading assessment in general has not kept pace with advances in reading research, theory, and practice (Edelsky & Harman, 1988; Squires, 1987; Teale, 1988; Valencia & Pearson, 1986). In the case of early literacy instruction, many reading theorists and researchers advocate an emergent literacy perspective. This approach emphasizes whole to part processing through an integration of reading, writing, listening, and speaking.

If it is true that pressures to achieve high scores on standardized tests can influence classroom curriculum and instructional decisions, then what pressures do current tests of "reading readiness" or early literacy exert? Do they provide information for teacher decision making that is developmentally appropriate for young children? Do they reflect advances in theory and research in early literacy instruction? Or do they lead to skills-based instruction, which early childhood experts (e.g., Elkind, 1987; Katz, 1988) characterize as inappropriate for five- and six-year olds? What types of assessment tools are available for evaluation of emergent literacy? Can these

tools be reliable predictors of achievement in early and later literacy? This paper attempts to answer these questions by presenting an analysis of items on current readiness and other early reading tests, by reporting interviews with teachers and others about their use of test results, and by reporting comparisons of teacher classification of pupils based on teachers' classroom observations with students' stanine scores on a conventional early reading test.

CURRENT EARLY READING ASSESSMENT TOOLS

Six standardized reading readiness and tests of early reading ability were analyzed (Clymer & Barrett, 1983; Farr, Prescott, Balow, & Hogan, 1986; MacGinitie, 1978; Madden, Gardner, & Collins, 1982; Nurss & McGauvran, 1986). An examination of these tests shows that auditory and visual discrimination, grapheme/phoneme correspondences, letter recognition, listening comprehension, word meaning, visual-motor coordination, and sentence meaning appear to be important factors in tests of early (K.5–1.9) reading ability. A summary of test components is displayed in Table 1.

When tasks for assessing these skills are analyzed, it is easy to agree with Kenneth Goodman's comment that, "Unfortunately, most standardized tests of reading and writing focus strongly on isolated skills and words. If they use connected texts, these are often short, disjointed, and deliberately obscure to make them harder" (1986, p. 42). The examples provided below represent many that were discovered through test item analysis.

Letter recognition was assessed in one test in such a decontextualized manner that any relationship to "real" reading is unclear. In a subtest entitled Recognizing Letters, the children are asked to "Put your finger on the picture of the spoon. In the box next to the spoon, find the letter *c*. Draw a line through *c*, the letter *c*." This type of item does not represent a real reading situation; moreover, it could easily confuse children. Each item in this section is preceded by a picture of something to help children keep their places on the page. The pictures are not particularly confusing, but in some cases the first letter in the word representing the picture is one of the letter choices, albeit incorrect. That is, the place-keeping picture is a spoon, the letter asked for is a *c*, and the choices are *n*, *s*, *e*, u, and *c*. Might a youngster logically match the picture of the spoon with the letter *s* instead of the letter *c*?

Another subtest, called visual discrimination, consists of items in which the student is to match two boxes that contain the same thing. Of the 10 items in this part of the subtest, only 2 require the children to match real words; the others ask them to match numerals, symbols, or parts of words. Again, the relationship of such a task to a real reading situation is difficult to see.

Even though other skills are tested (see Table 1), in each case, they are measured by testing a child's knowledge of a series of isolated skills, most of which can be categorized as part of one type of word identification skill,

TABLE 1

Test	Skills							
	Auditory discrimination	Visual discrimination	G/P correspondence	Letter recognition	Word meaning	Sentence meaning	Visual/ motor	Listening comprehension
Clymer-Barrett Readiness Test (rev. ed., 1985) K.5–1.5	X	X		X			X	
Gates-MacGinnitie Reading Tests (2nd. ed., 1978) Basic R 1.0–1.9	X	X	X	X	X	X		
Metropolitan Achievement Test (1986), Primer Lev. K.5–1.9	X	X	X	X	X	X		
Metropolitan Readiness Test (1986), Lev. 2 K.5–1.5	X	X	X				X	X
Science Research Assoc., Survey of Basic Skills(1985), Lev. 20 K.5–1.5	X	X	X	X				X
Stanford Early School Achievement Test (1982), Lev. 2 K.5–1.9	X	X	X	X	X	X		X

phonics. Very little assessment is provided for other word identification techniques, and even comprehension of words and sentences is assessed in a similarly isolated manner.

At best, such tests provide global information about how well children can do tasks, such as identifying letters or matching words, compared to other similar children. But what kind of instructional decision-making data does a stanine of 6 or a percentile rank of 66 provide for classroom teachers? It is difficult, if not impossible, to make daily instructional decisions based on these kinds of test results. Since these tasks are not directly related to the act of reading, they do not allow one to observe how well an individual child understands what the reading process is all about when viewed from an emergent literacy perspective. Teachers need answers to more meaningful questions, such as:

- Is the child able to gain meaning from print in the environment?
- Does the child understand the purposes and functions of reading?
- Does the child know how to handle a book?
- Which conventions of print does the child understand?

OTHER ASSESSMENT OPTIONS

The importance of a teacher's knowledge of a child's language awareness has lead to the formal development and publication of several tests of this construct. Three of these tests, the *Linguistic Awareness in Reading Readiness Test* (LARR; Downing, Ayers, & Schaeffer, 1983), the *Concepts About Print* test (CAP; Clay, 1972, 1979, 1985), and the *Test of Early Reading Ability* (TERA; Reid, Hersko, & Hammill, 1981), assess the child in various print-related situations and measure aspects of early reading behavior that are more connected to the actual process of reading than the abilities assessed in traditional reading readiness tests. Examples of these real reading behaviors are the child's awareness of the purpose of reading, awareness of what one does when he or she reads, knowledge of how to handle a book, and awareness of other print conventions.

However, critics (Day & Day, 1986; Hall, 1987) point out that the structure of parts of the tests appears to interfere with the child's ability to express the knowledge being assessed. For instance, in one subtest of the LARR, the student is asked to circle the person who is reading. One choice, a picture of a person writing, is an incorrect answer. But do we not read as we write? A close inspection of items on the other tests reveals similar problems. Such tests are not likely to reveal a child's true linguistic ability. Any formal standardized test can only assess selected parts of the total behaviors needed for reading and writing and may miss important skills and concepts children do possess, thereby severely limiting the teacher's ability to make important daily instructional decisions.

USE OF ASSESSMENT RESULTS FROM CURRENT TESTS

Despite the fact that current early reading tests may not measure the skills and concepts important from an emergent literacy perspective, tests are increasingly becoming a part of the kindergarten child's life. As part of the current study, kindergarten and first-grade teachers from a medium-sized suburban school district in western New York were interviewed to determine how they used the spring kindergarten test results. Teachers said that the readiness test results were typically useless for making instructional or placement decisions about their emergent literacy-based programs for three major reasons. First, they did not receive test results until the summer months, after school was already closed. Second, they believed that the tests did not provide information about many of the emergent literacy concepts and skills of interest to them. Third, because their reading instruction did not include workbooks, teachers believed that students were at a disadvantage when they took the tests, since they'd had little practice with the types of skills that are necessary to do well.

These kindergarten teachers administered the assessment device because the school district administration required it. But they resented the time it took away from instruction as well as the stress it caused some of their students. Kindergarten students, who were accustomed to interaction and teamwork in their everyday classroom work, could not understand why they were now told that they could not help one another. In addition, even though the students were told that they were not expected to know every answer, some of these young test takers ended the test very frustrated (a few in tears) because they were not able to answer every question.

When the first-grade teachers in the school were interviewed about their use of the spring kindergarten test results, they reported that they preferred to base their initial instructional decisions on two other sources. One was information from the placement cards that kindergarten teachers filled out for the students. Information on each card included the child's rank (high, middle, or low) in reading/writing ability, letters that the student could recognize, the grapheme/phoneme correspondences evident in writing samples, and the way in which the student reacted to print in the classroom. The other source of information favored over the test results was first-grade teachers' own observations during the first few weeks of school.

These first-grade teachers believed that standardized tests given four months earlier could hardly provide useful results in light of the fact that children grow and learn so rapidly at this age. They believed that the danger of misdiagnosis or mislabeling might be greater for these children than at any other stage in their academic development. While some teachers shared test results with parents at the first parent-teacher conference in early November, they did so because it had "always been done and the parents seemed to expect it," not because the teachers believed that the tests revealed anything important about the children.

The school principal also made little use of the test results when placing kindergarten students in first-grade classrooms. She preferred to use information from the placement cards and to speak with the kindergarten teachers about any children who appeared to have special problems. She did check the test scores to note students who scored in the lowest three stanines. She believed that low scores raised a "red flag" suggesting the need for further diagnosis.

According to the principal, the one person who did appear to make some limited use of the test results was the school district superintendent, who used a summary of the kindergarten test results, along with summaries of test results from all other grades, when he wrote his annual Comprehensive Assessment Report (CAR). These CAR reports are required of each school in New York and are used as the basis for identifying "low-performing" schools. Thus, the only substantive use of the test results in the school district in question seems to be for a state-level accountability purpose.

COMPARING OBSERVATIONAL RANKINGS WITH TEST RESULTS

The kindergarten teachers responsible for these seven heterogeneously grouped classrooms used observation of their 136 students throughout the school year as an assessment tool that provided valuable information for daily instructional decision making as well as for their year-end reports. For the purpose of this study, prior to administering the standardized test in early May, teachers placed their pupils into three groups, high, middle, and low, based on the perceived early literacy ability. According to teachers' reports, these placements were based on the children's:

- ability to handle books
- knowledge of how print works
- attitude toward books and reading
- recognition of letters of the alphabet
- knowledge of grapheme/phoneme correspondences
- use of invented spelling in writing
- ability to listen to and comprehend stories
- ability to read independently.

Also included as one of the variables was the more global concept of maturity, which teachers reported to consist of the child's ability to follow directions and to stay with a task for some period of time. The test that the students took purported to assess students' skills in auditory discrimination, grapheme/phoneme correspondence, decoding, and comprehension.

A comparison of these ability groupings with standardized test scores showed a significant relationship between teachers' judgments and students' total score stanines, (F [14 ,111] = 12, $p < .01$). The degree of relationship

between the teacher groupings and the stanine scores was computed by using the Pearson product-moment correlation coefficient. Correlations for the seven classes ranged from 0.57 to 0.87 ($p < .01$). A correlation of 0.72 ($p < .01$) was found over all teachers. Results of these analyses are presented in Tables 2 and 3.

The coefficient of determination (r^2) for the entire set of classroom groupings is 0.52. Thus, approximately 50% of the variation between the teacher groupings and the total test scores appears to be due to some common factors; the teachers and the test are tapping different factors for the other 48%. This is not surprising, because the teachers reported utilizing the youngsters' knowledge of a variety of skills, concepts, and attitudes (including their ability to use phonics skills) to make their judgments, while the test concentrated almost solely on phonics and phonics-related skills.

One interpretation of the results of these statistical tests is that the kindergarten teachers' judgments, taken as a whole, predict the test results very well. More important, perhaps, is that predictions made on the basis of teacher judgment are unobtrusive and nonthreatening to kindergarten students. In addition, the judgments based on observation can be used immediately to make instructional and placement decisions.

TABLE 2
Nested Placement within Teacher and Total SRA Test Score

Source of variation	*SS*	*DF*	*MS*	*F*	Sig. of *F*
Within cells	110.74	111	1.00		
Placement within teacher	177.17	14	12.65	12.68	<0.01

TABLE 3
Pearson Correlation Coefficients for Placement with Total Score over All Teachers and for Each Class

	Total SRA score
All teachers' placements	0.72*
Classroom 1	0.61*
Classroom 2	0.86*
Classroom 3	0.72*
Classroom 4	0.87*
Classroom 5	0.85*
Classroom 6	0.72*
Classroom 7	0.57*

* $p < .01$

The rather large differences among teachers' correlations with the total test scores suggest that some teachers (e.g., teachers 2, 4, and 5) may be using criteria quite similar to the test while others (e.g., teachers 1 and 7) may be using criteria quite different from the test. If the test's content validity is questionable, then judgments from teachers with the lower correlations may ultimately prove to have the best predictive validity, if the criterion to be predicted is, for example, the ability to get meaning from a text in third grade. Therefore, some predictive validity studies are being undertaken to compare teacher judgments over a three-year span.

CONCLUSION

An analysis of nine readiness and early reading tests indicates that they do not provide adequate assessment of skills and concepts deemed important from an emergent literacy perspective. Failures are due to lack of focus on relevant skills and concepts or inherent design problems. In addition, such tests, administered late in the school year, do not provide useful information for instructional or placement decisions either in the youngsters' current or next classrooms. In fact, the only use of the test results in some school districts is to satisfy state accountability requirements.

Alternative assessment procedures need to be found. Perhaps systematic observation, performed by responsible teachers who have a knowledge of reading and writing processes, the developmental learning process, and observational and record-keeping procedures and analysis may prove to represent a useful alternative to standardized testing for assessing growth and development in early literacy.

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Process of Change in Teachers' Beliefs, Attitudes, and Concerns During a Series of Whole Language Reading and Writing Workshops

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Whole language has been gaining momentum and making a major impact on the teaching of reading and writing throughout the 80s (Tunnell & Jacobs, 1989). This change in literacy instruction has prompted many teachers who use traditional types of reading instruction to seek information about whole language theory and practice. Whole language instruction is based on research and theory of language development and processes including research on reading and writing (Goodman, 1986). This model adheres to the belief that reading is an interactive process involving both the reader and the text and influenced by context (Anderson, 1977; Goodman, 1986; Rosenblatt, 1938, 1978; Rumelhart, 1985).

As teachers seek to discover what whole language is, how it is implemented, and why it is successful, many encounter dissonance because whole language requires teachers to look at learning from a different theoretical framework and to change their roles in the classroom (Nelson, 1990). It is therefore critical to examine those factors that promote and facilitate change in teachers' attitudes and beliefs. Research indicates that several key factors seem to influence teachers' role change: (1) the innovation must be perceived as effective and must fit into teachers' existing instructional frameworks (Lewis, 1987); (2) when teachers perceived an innovation to be successful and personally gratifying and satisfying, they were more likely to continue attempting to change (Spector, 1984); and (3) if teachers perceived that the innovation had a positive impact on students' attitudes and achievement, they were more likely to continue using it

(Morris, 1985). Showers (1985) contends that instructors and staff developers are more effective in promoting change when they coach because "coaching develops the shared language and set of common understandings necessary for the collegial study of new knowledge and skills" (p. 44).

Thus, data that provide information about teachers' change in beliefs, attitudes, and concerns related to literacy instruction and the factors affecting those changes are critical for planning teacher development programs. This study describes the changes in 31 teachers' beliefs, attitudes, and concerns related to a whole language reading program. The teachers in this study participated in a series of four whole language reading and writing workshops. Three questions guided the study: (1) How do teachers' beliefs, attitudes and concerns change during a series of whole language workshops? (2) What factors affect facilitation of teacher change? and (3) How do those factors affect their change?

DATA SOURCES

This study focused on 31 elementary through middle school teachers ranging in teaching experience from 3 to 27 years. Teachers represented eight school districts that ranged from small city to urban schools. About one-third of the teachers worked with children with special needs, two were supervisors, and the rest were classroom teachers.

The 16-hour workshop was offered in response to a county-wide needs assessment. The workshop was presented in four-hour sessions over a four-week period in the spring. The researchers co-taught the four sessions. Teachers volunteered to take the workshop. Some of the ideas and activities presented in the workshop were the writing process, word sorts, invented spelling and stages of spelling development, big books and shared reading, DRTA, DLTA, LEA, reading process demonstrations, semantic mapping, and ways to use children's literature. Strategies used in workshop presentations were modeling, demonstrations and samples, experiential learning, small group interactions (brainstorming, discussing, sharing, common problem solving), storytelling, and a panel discussion with other practitioners. Presentations were characterized by a variety of experiences and hands-on learning. Examples of children's writing products, visual aids, transparencies, children's trade books, teacher source books, and handouts were some of the materials used.

Data for the study were gathered from pre- and postsurveys about reading beliefs,[1] pre- and postsurveys of concerns, and informants' written learning logs. Teachers' concerns were surveyed through an open-ended statement in response to the question, "When you think about whole language/literature-based reading instruction and the writing process, what are your concerns?"

[1] Survey prepared by Carl Rosen, Ph.D., Kent State University.

Volunteers kept learning logs in which they reflected on their reactions to the workshops and their own learning. The researchers collaborated in reducing the data by identifying themes and patterns that emerged in informants' logs and survey concerns; changes in the beliefs about reading survey were analyzed statistically.

FINDINGS

Beliefs about Reading

Teachers completed a beliefs about reading survey at the first workshop session and again at the final session. The survey consisted of 25 statements designed to reveal how teachers viewed the reading process. Pre- and postresponses were analyzed to determine changes in teachers' beliefs. Survey statements were sorted into categories: word identification, comprehension, and instructional practice. Major shifts (10% or more) in beliefs were identified in each category. The most significant number and magnitude of shifts occurred in the word identification category. Teachers' beliefs about teaching word recognition moved from a traditional view that emphasizes phonics and skill-and-drill instruction to a whole language view that focuses on the use of context clues and students' prior knowledge in order to read for meaning. Specifically noteworthy was an 87% increase (from 8% to 95%) in the number of teachers agreeing with the statement "Children should be encouraged to guess when attending to an unfamiliar word in a story." Another shift to a whole language orientation was indicated in increased disagreement with three traditional statements emphasizing rules of phonics (from 54% to 90%), sight word drills (from 42% to 84%), and word attack skills (from 42% to 79%) as necessary for word identification.

Teachers' perceptions of their roles in reading instruction and selection of materials was the second category in which major belief changes were observed. Teachers' beliefs shifted toward a more child-centered orientation, characteristic of a whole language view of reading. For instance, 95% of the teachers agreed at the end of the workshop (an 18% increase) that "Finding the right book for the right child at the right time is as important as teaching the reading skills correctly." In the postsurvey, 100% of the teachers indicated they believed a child could learn to read without formal instruction and, equally important, they believed that students share in the responsibility for learning to read (from 50% to 63%). Fewer teachers disagreed (from 34% to 21%) with one traditional statement: "The best way to help all pupils learn to read is to find better materials to use to teach reading." Although seemingly inconsistent with change toward a whole language perspective, teachers' responses may have reflected the workshop emphasis on the selection and utilization of quality children's literature.

The comprehension category contained statements dealing with fluency, decoding, attitudes, and habits. The least amount of change occurred in this

category. Responses indicated that teachers already viewed comprehension from a "top-down" perspective. For example, 100% (an increase of 4%) of teachers disagreed with the statement "If every word is accurately pronounced, the story will be understood."

In summary, some revealing changes in teachers' beliefs became evident. Presurvey results indicated teachers already held some whole language beliefs about comprehension, although responses about word identification revealed a more traditional orientation. Postsurvey results showed a shift in emphasis to contextual word identification and child-centered instruction, both characteristics of a whole language perspective. These results indicate a considerable shift in beliefs concerning critical theoretical orientations related to teachers' and students' roles and reading instruction.

Teachers' Attitudes about Whole Language

In the early log entries, teachers indicated a positive attitude toward whole language and their ability to implement certain components with their own students. The following words were used repeatedly to define how they felt: *comfortable, excited, motivated, enjoyed,* and *interested.* One teacher wrote that she was still "undecided," while another reported: "I'm sold on whole language and I'm hungry for ideas, ideas, ideas!" Others wrote: "I am comfortable with risk-taking experiences" and "I was motivated to take this course because I realize that drilling, basals and grading have very little to do with children's learning to read." Another wrote "[Real, meaningful writing activities] sure make those worksheets and drill sheets impractical, senseless. I'd feel guilty passing them out."

However, in later log entries, teachers expressed frustration: "I came home from class overwhelmed and frustrated. I can understand the strategies. . .my problem is I don't understand how they fit into the classroom structure schedule." "What's frustrating for me right now, is that we have received wonderful looking handouts and I feel the need to read all of them and categorize all of them with my reference materials." Frustrations seemed to stem from how to implement and manage components of a whole language reading program within a prescribed time frame.

Overall, postworkshop attitudes about the whole language workshop sessions were positive and uplifting; the words most commonly used to express their attitude were *I enjoyed.* Aspects of the workshop teachers expressed as enjoying the most were stimulating and informative class sessions, story writing and journal writing, and sharing with other teachers.

Observing consequences of learning with students and self seemed to be factors affecting positive attitudes that in turn affected teachers' decisions to use certain components in their own classrooms. Log entries and workshop discussions revealed that teachers who actually implemented some of the strategies that were modeled in the workshop were excited and positive about their students' responses.

Teachers' Concerns

Understanding the dynamics of the change process is critical in meeting teachers' needs and concerns. The *Concerns-Based Adoption Model* (CBAM) (Hall, 1979; Hord, Rutherford, Huling-Austin & Hall, 1987) provides a model that can be used as a diagnostic tool for determining individual concerns. The seven stages of CBAM range from awareness to refocusing: (1) awareness (individual is not concerned about the innovation), (2) informational (individual wants to know more about characteristics of the innovation and how it relates to his/her own interests), (3) personal (individual is concerned about her/his role and conflict with anticipated demands of the innovation), (4) management (individual is concerned about organizing and managing time and about making the innovation run smoothly), (5) consequence (individual is concerned about how students are responding to the innovation), (6) collaboration (individual is concerned about cooperating with others regarding the innovation), and (7) refocusing (individual is concerned with how to make the innovation even more effective by changing parts of it that may be perceived as weak). As individuals progress over time in using an innovation, they may go through several of the CBAM stages. The CBAM framework was used to categorize teachers' concerns about whole language teaching and learning.

Concerns expressed at the beginning and end of the workshop were analyzed for themes and patterns. Preworkshop concerns mainly fell into the information, management, and personal stages of CBAM. Teachers were concerned about whether students would "get skills," such as vocabulary and language structure. Although they questioned the necessity of skills in basals, they still feared that a "shot-gun" approach would prevail and that not all scope and sequence skills would be "covered." Teachers wanted more information.

Management concerns focused on not having enough time to do extended projects or to read all the information. In addition, teachers reported wanting to have step-by-step directions and "how-to" information concerning the writing process, evaluating whole language, and integrating basals and literature.

Personal concerns most often expressed included "not knowing enough" and concern about "doing it right." In addition, teachers reported fear of not having district support with materials, adult help, and administrative backing. Reporting to parents was also considered difficult.

Information, management, and personal concerns were also expressed at the conclusion of the workshop. Information needs included reclarification of some aspects of whole language instruction. For example, one teacher wrote:

> On the subject of teaching the primary grades which I mentioned before, I understand that there are stages or levels of correcting students' invented spellings, but what are these stages and how would you recommend they be used?

Of management concerns, time was still considered a major constraint. Teachers wanted to read all the materials and to assimilate and incorporate them into their existing schedules. Teachers also wanted to know how to evaluate whole language, how to integrate basals and whole language, and more specific details of these management activities.

Personal concerns centered on their roles based on new knowledge: "I think after listening to all of you talk about writing these last few weeks that I have been too critical." Many also felt concern about leaving the workshop support system.

Some teachers were ready to adapt the innovation to meet their own needs. For example, one teacher wrote: "I'd like to change or adjust some aspects." Another teacher expressed it this way: "I'm bothered about the term *publishing*, as it sounds contrived. Can't we say, 'We'll get it ready to share'?"

As teachers gained information about whole language, used components in their classrooms, and observed the consequences of these changes, their concerns seemed to cluster around management issues and personal concerns. Once they had gained some information and tried some activities, they wanted to know how to evaluate, initiate, and integrate basals and whole language. Throughout the workshop, teachers reported feeling frustrated by time constraints that inhibited them from implementing new strategies in their classrooms while maintaining present curricula.

Factors Affecting Change

In his book, *Diffusion of Innovation*, Rogers (1983) states that from half to nearly all of the variance in the rate of adoption of an innovation depends on five factors: (1) the type of innovation decision, (2) the communication channels, (3) the nature of the social system (norms, degree of interconnectedness, etc.), (4) the perceived attributes of the innovation, and (5) the extent of the change agents' promotion efforts. These factors, too, were used to understand teachers' change process throughout the workshop.

For these teachers, the decision to learn about the innovation was personal and voluntary. As indicated above, many teachers expressed that they were already motivated to seek information about whole language before they came to the workshop. In addition, workshop participation was voluntary.

Communication channels (Rogers, 1983) that involve face-to-face exchange between two individuals "are more effective in persuading an individual to adopt a new idea, especially if the the interpersonal channels link two or more individuals who are peers" (p. 18). These conclusions are similar to Showers' (1985) results relating to peer coaching. The resource coordinator who facilitated establishing the workshop also enrolled in the workshop as a participant and interacted with teachers as a peer. Thus, he supported formal and informal communication channels.

Workshop presenters were also perceived to be "homophilous," that is, the "degree to which pairs of individuals who interact are similar in certain attributes, such as beliefs, education, social status and the like" (Rogers, 1983, p. 18). Workshop instructors were elementary teachers and doctoral students majoring in reading. In addition, teachers indicated in their logs that the theory and practices presented in the workshop were supported by other authorities they had heard, read, or seen.

Mass communication channels such as published materials also seemed to be another avenue from which teachers sought information about the innovation. Thus, the interpersonal communication employed inside and outside the workshop sessions supported teachers' change process.

The common nature of the social system also facilitated the change process. As noted earlier, participants had common needs, concerns, and goals. In her log, one teacher expressed her feelings about the common nature of the group this way:

> Tomorrow is our last day of class and I realize what I am going to miss the most is the sharing of ideas, the stimulation of sitting in a room filled with teachers willing to take a risk to be better teachers, to have more fun with their children. . . . This course, its teachers, the class have been a support and an encouragement to me while I sort out and begin to employ whole language techniques.

The relative advantages, compatibility with needs and beliefs, degree of complexity, trialability, and observability are also attributes influencing innovation adoption (Rogers, 1983). Teachers' ideas about the attributes of whole language strongly affected their change process. Although some teachers reported knowing about whole language before they came to the workshop, many learned new advantages. A teacher expressed the advantages this way in her log: "This experience has shown me that journal writing can really produce some good stuff. . . ." Most teachers found the whole language philosophy very compatible with their needs and beliefs. For example, one teacher wrote in her log: "It makes sense to expose them to 'real' books, their own language, and allow them to participate in 'real' meaningful writing activities." Still another teacher wrote:

> The information about invented spelling is fascinating. This is an area I'd like to learn more. . . the journals you showed are wonderful! . . . Now I can see many more applications than just a diary-type journal. I do plan to implement some of these journal strategies.

The perceived complexity of whole language instruction seemed to be an initial concern for some of the teachers, but during the workshop most found teaching reading and writing based on a whole language philosophy was not so hard after all. One teacher wrote: "It wasn't that hard. . . . I'll try it." Another wrote:

> Talking about the process approach to writing was valuable. I have tended to focus too much on mechanical errors when discussing students' writing with them. I'm looking forward to learning more about peer editing next week. I'm going to do this with my students.

Trialability ("I can do this on a limited basis") was also evident in teachers' logs and in writing samples teachers brought in from their own students. One wrote "What really seemed to hit home was that I really need to do a lot more modeling with kids." Another wrote, "After the first workshop, listening and participating, . . . I decided to try [an activity] out on my first graders." She went on to describe in great detail how she implemented it. Teachers were also positive in their self-reports of implementation of newly learned strategies.

The final attribute affecting change, observability, was also evident in teachers' logs. This entry is an example:

> I was thrilled to get my first note of several sentences from one of my low ability kids. Last week's workshop session dealt with DRTA. I really enjoy using it with my kids. . . . I even noticed the kids using the technique. While Jerry was reading to a friend, he asked, "What do you think? Let's find out!"

The fifth and final factor that affects the rate of adoption of an innovation is the extent of the change agents' promotional efforts. The instructors were perceived as credible, expert sources of information. Because they were fellow practitioners, they shared a common identity and point of view with teachers. Participants characterized the instructors as having "enthusiasm" and "sincerity" and as giving "encouragement." One teacher wrote: "They were good!" The instructors promoted the adoption of a whole language philosophy in the workshop session by modeling and demonstrating a variety of strategies and ideas. According to teachers' logs, most teachers tried out many of the ideas presented in the workshop; others brought actual students' products to share with the rest of the class. One teacher expressed it this way:

> It's so stimulating to be with teachers who shared a common philosophy and who are trying creative approaches to reading and writing. I sure wish that there were area support groups. Nothing exists at our school. I'm alone in a group of teachers who wish that the limits for the Xerox machine were endless.

Participants' logs, supported by verbal feedback, indicated six major factors that teachers found to be most effective in facilitating their change processes: the ideas and activities presented; characteristics of the workshop presenters; practical application and information; teaching strategies used by the presenters, namely modeling; characteristics of the presentations and techniques used; and materials used.

SUMMARY AND IMPLICATIONS

Several key factors, both cognitive and affective, emerged as important in affecting teachers' change process. Because teachers were able to actually participate in strategies as learners, share experiences and reflections with peers, use components and observe consequences, and experiment with adaptations, their beliefs, attitudes, and concerns changed during the course of the whole language workshop.

Pre- and postworkshop surveys of beliefs and concerns, teachers' logs, and workshop discussions during the four-week workshop revealed evident shifts in how teachers perceived their roles and their students' roles in reading and writing programs. The disparity between the beliefs about word identification and comprehension at the beginning of the workshop narrowed, and belief and practice became more congruent. For instance, most of the teachers already viewed comprehension from a whole language perspective; however, word identification became more contextually focused and less skill based as indicated in the postworkshop survey. Information from teachers' logs and workshop discussions supported these shifts.

Teachers' concerns were influenced by their belief systems; by their feelings and knowledge about whole language, reading, and writing; by their perceptions of their ability to be whole language teachers; and by the support and assistance they received from the teacher/coaches and peers in the social learning environment of the workshop sessions.

Results indicate that as teachers became informed and knowledgeable about whole language, their beliefs about the reading process shifted and their attitudes became more positive about whole language practices. However, management concerns and concerns about having district support became major issues for the teachers. In order for long-term individual change to be effective, support systems within schools and school districts need to be established (Brandt, 1987; Dudney, 1987; Hord & Hall, 1987; McLaughlin, 1987; Showers, 1985). Enlightening teachers and providing information that encourages change in beliefs and attitudes will create greater dissonance for teachers if their expressed concerns about district support are not met.

Staff developers who are sensitive to individual teacher's affective and cognitive structures and concerns will be more helpful if they address those specific needs rather than just providing inservice without long-term and on-going support systems (Nelson, 1988). Teachers who participated in this workshop went back to districts where administrators had neither officially accepted whole language theories nor established support systems. Teachers and administrators need to be aware that individual change requires support systems and that the change process itself will take time.

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Content Area Reading Practices: Relationships of Teacher Usage and Ability

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Research indicates substantial contradictions between what reading educators want content area teachers to practice and what actually occurs in the classrooms (Ratekin, Simpson, Alvermann, & Dishner, 1985; Smith & Feathers, 1983a). While some content teachers may have simply decided that content reading practices are not worthwhile, others may have deemed such practices worthwhile but not a part of *their* role (Gee & Forrester, 1988). In other cases, the instructional practices of the teachers may not accurately reflect their intent (Smith & Feathers, 1983b). For many content teachers, as with teachers of developmental reading (Duffy, 1983), underlying professional and environmental constraints may inhibit accepting or implementing what may have otherwise been included in their pedagogy (e.g., Bean & Wilson, 1981; Davey, 1988; O'Brien, 1988). All in all, knowledge about content reading practices may not necessarily lead to actual implementation and, conversely, usage may not ensure understanding and ability.

While contradictions such as those mentioned above seem generally well documented, numerous questions about the dynamics of such relationships remain open to investigation. With these concerns in mind, our purpose for the present study was to identify high- and low-ranked instructional practices and subsequently to explore the nature of relationships between what content teachers perceive as their ability to use reading practices and their perceived implementation of the same practices. Additionally, we studied

how particular background factors, such as experience, content specialty, and training relate to particular inconsistencies.

METHOD

For this investigation, 129 secondary teachers in a large, Mid-Atlantic school district completed a questionnaire in which they provided pertinent background information and rated their frequency of use and their perceived ability to use 25 instructional practices. (See Appendix; see also Shannon, 1984, for a description of the instrument adapted for this study.) The scale of usage and ability ranged from 0 to 10, with 0 indicating *never* for usage or *cannot do it* for ability and 10 indicating *always* for usage or *can do it very well* for ability.

First, we calculated the means for all items and determined a ranked order of practices of ability and usage. In addition, we calculated frequency tables to determine relationships between usage and ability. We also analyzed the relationships between the following background factors and usage and ability: years of experience in teaching, gender, total time spent in personal reading outside of school, whether the teacher enjoyed reading, time spent reading professional journals, whether the teacher had a content area reading methods class, degree attainment, and content area taught. These background factors were also employed in frequency table calculations. Data analyses have been limited to descriptive statistics.

RESULTS

Population Profile

The teachers surveyed in this study had taught for an overall average of 11 years, with an average experience of 7.1 years in their present content area. Teaching experience ranged from 1 to 35 years. The bachelor's degree was the highest attained degree for 57 percent of the teachers. Forty percent had completed master's-level training, and the remaining teachers had earned specialist degrees or doctorates. The sample comprised 57 percent females.

The largest number of teachers, one quarter of our sample, taught English. Next, in order of content area taught, were physical education or health; math; science; social studies, art, or music; and home economics or shop. Fewer than half (43%) of the teachers had taken a course in content area reading instruction. We also asked the teachers to note their personal reading habits and to rate their personal enjoyment of reading. While 84% reported that they enjoyed reading and 9% reported they enjoyed it a lot, 7% indicated that they did not enjoy reading. Overall, teachers reported an average of nine hours per week spent in reading activities outside of classroom tasks. These activities included reading newspapers, magazines, novels, nonfiction material, professional journals, and miscellaneous materials.

Instructional Practices

Overall, the teachers reported a usage mean of 5.9, which indicates that, in general, teachers utilize the 25 activities somewhat. The overall average for ability was 6.2, a score consistent with usage, and indicating that teachers generally believed that they possessed some ability to perform designated activities.

Usage Ratings

Teachers reported using some practices more than others (see Table 1). The five areas receiving the highest overall ratings were (1) encouraging reading as a valuable method to gather information; (2) asking factual recall questions; (3) asking questions involving interpretation of information; (4) providing necessary background, motivation, and information for reading assignments; and (5) encouraging continual questioning on all levels during reading assignments. The five least used practices were (1) applying readability formulas, (2) using a form to analyze textbook appropriateness, (3) distinguishing remedial reading from resource reading, (4) articulating a school-wide responsibility for using reading in content areas, and (5) providing specific reading study strategies for content area reading.

Ability Ratings

Teachers also reported on their ability to perform the identified practices. The highest rated items ranged from 6.8 to 7.4 and included (1) asking factual recall questions; (2) asking questions involving interpreting information; (3) reading extensively in areas of interest and sharing experiences with students; (4) providing reading opportunities for students; (5) providing necessary background, proper motivation, and related information for all reading assignments; and (6) preparing efficient study guides, sets of questions, or structured overviews for reading assignments. The first two ability items were also included in the top five usage items. The bottom five areas in ability were (1) applying readability formulas, (2) using a form to analyze textbook appropriateness, (3) using informal measures to assess students' reading levels, (4) articulating a school-wide responsibility for using reading in content areas, and (5) identifying the related roles of reading specialists and content area teachers. The first, second, and fourth lowest items were ranked in identical positions for usage.

Usage-Ability Relationships

We further investigated usage-ability relationships and asked, in particular, how specific background factors might affect such relationships where (1) usage was rated as greater than ability and (2) ability was rated as greater

TABLE 1
Practices Ranked High and Low

Practice	Average rating
Highest for usage	
Encouraging reading as a valuable method to gather information	7.8
Asking factual recall questions	7.4
Asking questions involving interpreting information	7.1
Providing necessary background, motivation, and information for reading assignments	7.1
Encouraging continual questioning	7.0
Lowest for usage	
Applying readability formulas	3.0
Using a form to analyze textbook appropriateness	3.2
Distinguishing remedial reading from resource reading	5.2
Articulating a school-wide responsibility for using reading in content areas	5.2
Providing specific reading study strategies for content area reading	5.3
Highest for ability	
Asking factual recall questions	7.4
Asking questions involving interpreting information	7.2
Reading extensively in areas of interest and sharing experiences with students	7.2
Providing reading opportunities for students	6.8
Providing necessary background, proper motivation, and related information for all reading assignments	6.8
Preparing efficient study guides, sets of questions, or structured overviews for reading assignments	6.8
Lowest for ability	
Applying readability formulas	3.8
Using a form to analyze textbook appropriateness	4.1
Using informal measures to assess students' reading levels	5.1
Articulating a school-wide responsibility for using reading in content areas	5.1
Identifying the related roles of reading specialists and content area teachers	5.5

than usage To conduct this exploration, we calculated the following frequencies for each of the 25 items: the percentage of teachers who rated usage greater than ability (U>A); the percentage of teachers who rated ability greater than usage (A>U); and the percentage of teachers who rated usage equal to ability (U=A). The five items with the highest frequencies for each of the two kinds of inconsistencies (U>A and A>U) are found in Table 2.

Next we looked at the relationships between these categories of responses and teacher profile variables, using either intact demographic categories, such as gender or content specialty, or calculated averages for relevant

TABLE 2
Items Ranked High for U>A and A>U

Practice	Percentage of teachers with inconsistency
Items with highest A>U	
Using a form to analyze textbook appropriateness	31
Using readability formulas	30
Preparing efficient study guide, sets of questions or structured overviews for reading assignments	21
Using informal measures to assess students' reading levels	16
Teaching context or structure clue to aid in reading difficult vocabulary	15
Item with highest U>A	
Encouraging reading as a valuable method of information gathering	27
Having alternative materials on curricular topics, on all reading levels available for student use	20
Stating specific purpose for reading	19
Providing necessary background, proper motivation, and related information for all reading assignments	18
Using informal measures to assess students' reading level	18

background variables. Because of low numbers for some response options, the variable concerning personal enjoyment of reading was dropped from further analyses. Likewise, instructional content areas included were reduced to English, science, math, and physical education/health.

The five items with greatest U>A relationship had an average inconsistency of 20.4%. This means that, on the average, 20.4% of all the teachers in the survey reported usage greater than ability. Conversely, an average of 22.6% of the teachers rated ability greater than usage (A>U) on items with the greatest A>U discrepancy. As we looked closer at particular teacher characteristics, we uncovered some interesting relationships.

While degree earned did not seem to relate to these reported ratings, other background variables did. The males in this study reported a higher rate of U>A and A>U inconsistencies than did the females. Methods training also appeared to affect the usage-ability relationship. Teachers who had taken a course in methods for content area reading had a lower percentage of U>A relationships and a higher percentage of A>U relationships.

Teachers who reported below average personal reading time also had a greater rating of U>A than did teachers who spent more than average time in outside personal reading. Differences between these two groups were less dramatic in A>U.

TABLE 3
U>A and A>U Inconsistencies Related to Background Factors on Targeted Items

Factor	Percentage on targeted U>A items	Percentage on targeted A>U items
Degree		
Bachelor	20.2	23.4
Master	21.6	23.0
Gender		
Female	12.6	20.2
Male	25.2	27.4
Content reading methods course		
Had	19.0	24.8
Did not have	23.6	16.6
Amount of time spent in personal reading		
Above average	14.0	22.8
Below average	22.8	20.0
Amount of time spent in personal reading of professional journals		
Above average	18.6	22.4
Below average	20.0	25.8
Years of teaching experience		
Above average	20.0	21.4
Below average	20.2	26.6
Instructional areas		
English	18.0	18.0
Science	20.0	26.6
Math	10.8	35.2
Physical/health education	12.2	35.0

Overall averages for targeted practices: U>A items, 20.4; A>U items, 22.6

Teachers of English and science had a higher rate of U>A than did teachers of math and physical/health education. This percentage was still below the average for all teachers, however. Conversely, math and physical/health education teachers rated ability over usage to a much greater degree than did the English and science teachers and to a greater degree than did other teachers in general. Results also indicated a higher A>U rating for science teachers than English teachers.

To sum, teacher ratings for ability and usage varied across content reading practices. Furthermore, background factors influenced relationships between ability and usage.

DISCUSSION

Overall results showed that the surveyed teachers reported some ability with all of the identified practices. The only two items with an overall average of

less than five had to do with analyzing textual material for reading level and appropriateness. Reported levels for using the 25 items and strategies were somewhat lower than reported levels for ability.

High- and Low-Rated Practices

Highest ranked items for both usage and ability involved instructional aspects of content area reading. Low-ranked items tended to involve assessment practices or aspects of role. Moreover, the item ranked highest for usage had the largest degree of inconsistency between the usage and ability. Three of the five high-usage items had usage means greater than ability. None of the lowest five items presented this particular inconsistency. It appears that the more widely used the practice, the less commensurate the ability to implement it.

Perhaps this pattern indicates teachers lacking some skill to use an instructional practice but generally recognizing its value. Also, high utility practices might otherwise outpace skills of implementation. More importantly, because these widely used (top-ranked) instructional practices deal with questioning, activating prior knowledge, and monitoring one's reading through self-questioning, we see a danger in this pattern. Content processing may not occur if ability to implement these practices is lacking.

Another concern emerged regarding other low-ranked usage and ability items. An unfortunate trend dealt with student ability to interact with appropriate level text. Three low-ranked items detailed the following: (1) using readability formulas, (2) using a form to analyze text appropriateness, and (3) assessing student reading levels. Faculty reported having little knowledge or use of assessments for texts or students' reading levels, leaving us to question the textual demands made upon students. Are students overwhelmed by texts or not challenged? The mismatches that can result between reader and text suggest reading specialist intervention. However, the practice of identifying the role of the reading specialist in content areas is another area in which teachers report relatively low ability.

Inconsistencies and Teacher Background

We noted nearly double the percentage of inconsistencies for male teachers. These inconsistencies raise the following questions: (1) Were there differing criteria for the males in this study to become secondary teachers? (2) Did males come to be content area teachers through different channels than did the females? (3) Does the instruction of males in our institutions of higher learning differ from females? (4) Are the content areas that report greatest inconsistencies (i.e., math, science, and physical/health education) predominantly male and therefore subsumed under content area differences?

Inconsistencies also surfaced according to content area. English and science teachers rated usage over ability to a greater degree than did math

and physical/health education teachers. This may be due to unusually low usage ratings by math and physical/health education teachers.

We also noted greater inconsistencies of usage over ability for teachers who spent less than average time on outside personal reading. Perhaps those teachers who read more have a better ability to employ reading practices they themselves apply.

Having had a content reading methods course also seemed related to inconsistencies. Teachers who had not had a course tended to have more inconsistencies of U>A than did teachers who had had a course. The teachers who had a course had a higher rate of A>U. Perhaps teachers who lack training may still attempt to implement commonly valued practices. At the same time, training may enhance ability or at least knowledge about practices but not necessarily foster usage.

Implications

These findings confirm what others have pointed out about content area reading practices. Some teachers do not use or are not able to use practices identified in content area reading instruction. Ability may not match usage, especially for high utility items. Further, several factors may influence inconsistencies of ability and usage.

Instructional monitoring and assessment should include indices of both usage and ability. Supervisors and teachers alike should be aware of this interplay and of the effects of other factors, such as training in content area methods, particular subject matter taught, and personal attitudes and habits concerning reading.

Despite the marked inconsistencies reported here, an important and favorable assumption may be that the teachers do recognize the value of these practices even though they may lack appropriate skill to perform some of them. In addition, honesty in recognizing lack of ability or usage may indicate the potential for improvement with effective training. Our findings appear to support the importance of preservice as well as inservice training in content reading methodology and processes. Such training, if it is to be effective, will need to be geared to individual and/or content needs.

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APPENDIX
PRACTICES INCLUDED FOR RATING

1. Using readability formulas
2. Using a form to analyze textbook appropriateness
3. Using informal measures to assess students' reading levels
4. Having alternative materials on curricular topic, on all reading levels, available for student use
5. Encouraging reading as a valuable method of information gathering
6. Stating specific purposes for reading
7. Teaching context or structure clues to aid in reading difficult vocabulary
8. Providing necessary background, proper motivation, and related information for all reading assignments
9. Providing specific reading/study strategies for reading different materials in different content areas
10. Encouraging continual questioning on all levels of comprehension for students during reading
11. Preparing efficient study guides, sets of questions, or structured overviews for reading assignments
12. Asking questions that involve factual recall

13. Asking questions that involve interpretation of information
14. Asking questions that require thinking on the levels of evaluation, synthesis, application, and creative awareness
15. Questioning socratically (inductively, gradually arriving at generalizations)
16. Ensuring that students on all reading levels have basic understandings needed for further learning
17. Providing reading opportunities for students (e.g., allowing time, providing resources, developing related bulletin boards)
18. Reading extensively in areas of interest and sharing experiences with students
19. Distinguishing remedial reading from resource reading in content areas
20. Articulating a school-wide responsibility for using reading in all content areas
21. Identifying reading/study skill priorities for a given content area
22. Accepting responsibility for teaching the reading/study skills priorities for a given content area
23. Accepting responsibility to improve all students' reading ability
24. Identifying the related roles of reading specialists and content area teachers
25. Identifying resources that provide information on instructional practice related to the use of reading in the content areas

National Accreditation and Its Effect on the Literacy Professional: The Making of a Profession

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The decade of the eighties saw a tremendous increase in efforts to professionalize all aspects of teacher education. State departments of education or state legislatures sought to strengthen state standards for licensure, generally by adding some kind of test for initial licensure in a field. At the national level, both the National Board of Teaching Standards and the Holmes Group advocated the addition of a new credentialing procedure—*certification*. Although this term had been used synonymously with licensure for years, it was now being used quite differently: as the process by which practicing professional associations could certify members who showed high degrees of proficiency in a given field.

While both *certification* and *licensure* refer to procedures used to guarantee the individual educator, *national accreditation* and *state program approval* refer to processes used to ensure the quality of instructional programs designed to prepare educators for their professional roles. At the state level, the approval process is the responsibility of state departments of education (Cassidy & Seminoff, 1988; Rowls & Hanes, 1985). Generally, to obtain state approval, an institution must prepare a self-study that is read by a review team prior to visiting the campus of the institution. Although evaluation processes differ, all focus on the programs that prepare educators for the licensure areas in that particular state. Thus, for instance, an institution's graduate program in gifted education will not be reviewed by the state team unless that particular state licenses teachers of the gifted.

In the field of education, national accreditation of a given institution has

been conducted by the National Council for the Accreditation of Teacher Education (NCATE). Since national accreditation is voluntary, many institutions that prepare educators (particularly the smaller private institutions) do not opt for this recognition. Nevertheless, about 84% of the teachers in the United States do graduate from NCATE-accredited colleges and universities (Cassidy & Seminoff, 1988).

In the early eighties, NCATE, along with many other educational agencies, was severely criticized (Wheeler, 1980) on a number of issues including the composition of the visiting teams, vagueness of standards, and an emphasis on whether tasks or functions are merely performed, rather than whether they are performed well. These criticisms and a general climate for educational reform led to changes in the NCATE process (Gollnick & Kunkel, 1986). Many of these changes have implications for the literacy professional.

The discussion that follows identifies critical changes brought about the redesign of the national accreditation process (i.e., NCATE) and the implications for such changes on the reading, English, and language arts professoriate and professional preparation programs. Beyond the impact of national accreditation, this paper concludes with a discussion of additional initiatives for "professionalizing" the broader education and literacy professions and of the role that professional associations may play in reshaping and reassuring the future.

These discussions are timely, set against the backdrop of renewed interest in teaching as a viable profession, the current and continued projections of shortages in the teaching work force, and the nation's literacy crisis, all of which may soon redefine traditional public education. The opportunities have never been greater, nor has the national demand.

IMPACT ON THE LITERACY PROFESSIONAL

Of changes reflected in the NCATE redesign, three warrant discussion to appreciate their full impact on the literacy professional. The first change involves compliance with institutional and curricula preconditions that precede formal NCATE evaluation. The second establishes expectations for students entering the professional program and its culminating clinical teaching experience, and the third sets expectations for the teaching loads of faculty whose major responsibilities are assigned to reading, English, and language arts programs or courses. These changes collectively may have positive effects on curriculum quality and program milestones and on the professional environment of the faculty who deliver the curriculum.

Precondition 8

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One of the changes brought about by NCATE redesign was the delineation of a number of preconditions that must be met before an institution can be evaluated. Perhaps the most well-known among literacy professionals in

higher education is Precondition 8, which stipulates that the school or department of education "submit a curriculum portfolio (report) for each program for which there are NCATE–approved guidelines." The IRA *Guidelines for the Specialized Preparation of Reading Professionals* (1986) was approved by NCATE in 1987 and thus, institutions preparing reading specialists, reading supervisors, and elementary teachers now submit folios to IRA delineating how their programs meet IRA's guidelines. NCTE's *Guidelines for the Preparation of Teachers of English Language Arts* (1986) was also approved by NCATE in 1987; thus, institutions that prepare secondary English teachers must submit folios to NCTE for review. While most organizations have had guidelines for the preparation of professionals in their respective disciplines, the affiliation with NCATE ensured that, for the first time in some cases, attention would be paid to these standards.

The folio preparation and review process formalizes the ties between accreditation and the professional association and, ultimately, its professional membership. It is entirely dependent on and governed by peer review. The process serves as an impetus for self-study. Folio review is a time for the professoriate to examine the "fit" between institutional curriculum standards and those endorsed by IRA and NCTE, which were developed themselves through peer consensus (Hanes, 1988). Prior to the redesign of NCATE, program colleagues may have had little or no "in-depth" involvement in the self-study. Precondition 8 places the responsibility where it should be—in the hands of those who deliver instruction, design curriculum, and can make necessary changes. The latter is an academic legacy of long standing. The folio is reviewed by a team of professional peers from IRA or NCTE. Professional ownership of the self-study and review by association peers legitimize the process and, in the spirit of professionalism, offset the labor involved in preparing the folio.

Program Milestones

The NCATE redesign has influenced the literacy professional and enhanced the profession in other ways. Endorsed criteria for admission to the professional program and for time spent in clinical teaching experiences are more selective and rigorous. NCATE standards dealing with students stipulate, in part, that all students be assessed in several ways before entering the professional education program: tests of basic skills, recommendations, biographical information, and the successful completion of college/university course work with a minimum grade point average of 2.5. These entrance requirements are intended to ensure a pool of quality students for teacher education programs. NCATE standards dealing with the institution's "relationship to the world of practice" stipulate that the student teaching experience be a full-day responsibility for at least 10 weeks, thus helping to ensure that prospective teachers have adequate practical experience.

Emerging from these and other institutional criteria are distinctive program milestones that define expectations at critical junctures—admission to the professional program, admission to and exit from student teaching. Students must meet the requirements of these milestones to progress in the program. Many programs, either in response to state prescriptions or through self-imposition, have instituted such milestones. For example, programs in states that conduct induction-year performance assessments have opted to administer similar assessments as exit requirements for the student teaching semester. Such practices may counter the tradition of grade inflation, particularly in clinical practica; moreover, they align the preparatory programs with the real expectations of the induction year and, consequently, safeguard the success of the graduates.

Faculty Teaching Loads

The new standards grouped under the faculty category in NCATE's redesign also promise some positive impact on the literacy professional. The most heralded statement is probably: "The teaching load of undergraduate faculty is no more than the equivalent of 12 semester hours; the teaching load of graduate faculty is no more than the equivalent of 9 semester hours." Many faculty see these standards as a means to help restrict undue teaching responsibilities; such restriction may allow faculty to more easily fulfill responsibilities in the areas of scholarship and service.

BEYOND THE LIMITS OF NATIONAL ACCREDITATION

NCATE's national accreditation process cannot fight professional battles on all fronts. The formal inclusion of professional associations in the accreditation process through the precondition folio review enforces professional say-so in both defining and reviewing the curriculum. There are obvious limitations, however, the principal one being that NCATE review is restricted to programs that prepare professionals for the school setting (K–12). Association guidelines go further than this. IRA, for example, defines roles beyond the school setting (e.g., Role 6, reading coordinator/supervisor) and prescribes academic study in reading for allied professionals (e.g., special education teachers, administrators). IRA's *Guidelines* will not be used per se in NCATE reviews of programs that prepare these allied professionals. Instead, the approved guidelines of the affiliate associations of these education professions are primary, and the use of IRA *Guidelines* is no more than advisory.

State and local practices sometimes run counter to national efforts; NCATE's articulation with states cannot (nor is it intended to) prevent some of these practices. By design, the national accreditation process is built on good will and collaboration. For example, NCATE will review only programs approved by state level processes; the latter is a precondition of national review. Nevertheless, some state legislatures (e.g., Texas, California, New

Jersey and Virginia)[1] have set limits on professional and pedagogical course work for academic preparation toward initial licensure and have regulated loan incentive programs for students entering professional programs (e.g., South Carolina and Pennsylvania). Such decisions bypass both the accredited standing of academic programs and the profession. Local hiring and staffing practices may also bypass professional guidelines. These matters lie outside the sanctioning domain and purview of national accrediting bodies.

Many states are encouraging NCATE accreditation for their teacher education programs, but state-mandated ceilings in favor of content-specific or liberal arts emphases for prospective teachers testify to their waning faith in the education professions to adequately prepare the next generation of teachers and other school personnel. Such actions challenge the right of academicians to govern themselves. Few, if any, other professions have met with such opposition, intended or otherwise, especially in the academic arena.

To combat the national teaching shortage of a projected 1.5 million teachers to be realized this decade (AASCU, 1986), several states have developed plans for teacher recruitment and programs to sustain inservice professionals, including bonus pay and improved salary schedules. State governments have passed major educational legislation that has allocated resources and charged state departments of education to sponsor local initiatives to promote teaching as a career. In states such as South Carolina, local districts, typically in partnership with area colleges and universities, have organized teacher cadet programs targeted at academically competitive high school students. Public awareness campaigns to disseminate information about the positive aspects of teaching and student loan programs for preservice teachers have been established to attract academically competitive students into teacher preparation programs. The best student loan programs have stipulations that ensure the inclusion of academically able minority students and loan forgiveness for those who prepare in designated critical needs subjects and/or gain employment in critical needs geographic areas. Such developments are promising, given the broader demand for qualified committed teachers and the specific need for a substantially greater number of minority teachers to serve as role models and community liaisons (Hanes, 1987). But here too, the specific recruitment of literacy professionals has not been identified. The hard sciences, mathematics, and even library science are cited more often as "high needs" subject areas.

Finally, state and local practices may permit certain school service personnel without reading credentials (and often without initial state

[1]In response to the recent Texas legislation that limits professional course work to 18 credit hours, including student teaching, NCATE is considering the possible withdrawal of its accreditation of programs in Texas state institutions of higher education, and with it, reciprocity for its graduates who seek licensure in other states.

licensure) to administer reading programs. Teachers without reading credentials may teach resource or remedial classes where major responsibilities include the treatment of reading problems. In such cases, the school psychologist, learning disabilities teacher, or school counselor is more likely to plan and administer reading diagnoses and to recommend instruction than a credentialed reading specialist. These are regular occurrences at the local level, with no implications for the good standing or funding status of the schools that engage in them (Hanes, 1987). More important, these practices thwart any logical approach for dealing with the literacy crisis in our schools and communities and, in essence, work to prevent the profession from fulfilling its mission.

THE ROLE OF THE PROFESSIONAL ASSOCIATION

The sole purpose of NCATE (1987) is "to require a level of quality in professional education that fosters competent practice of graduates, and to encourage institutions to meet rigorous academic standards of excellence in professional education" (p. 1). This statement provides public assurance about accredited programs. When the magnitude of accreditation is ignored or disregarded, or its impact has limited reach, the programs and the professionals they have prepared are compromised. Professional associations, including memberships at the state and local levels, may need to take action for the sake of the profession. Two recent actions serve as examples. At its September 1989 board meeting, the International Reading Association approved the formation of a new special interest group, Professionalizing Careers in Reading/Literacy Development. This group is committed to keeping abreast of current issues in licensure, certification, state program approval, and accreditation. In addition, this group will serve as a proactive body to encourage IRA to become more assertive in these and related issues.

The American Association of Colleges of Teacher Education (AACTE) also has reaffirmed its interest in national accreditation. At a recent board meeting, members voted not to support the proposed plan of the National Board of Teaching Standards because the National Board refused to consider graduation from an accredited institution as a prerequisite for certification. These single efforts are the kinds of stances that back the efficacy of national accreditation and further the profession at large. For the literacy professional, the agenda is already filled with initiatives to realign and to reacquaint state and local governance with the reading and broader literacy profession.

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CHALLENGES IN LITERACY INSTRUCTION

Invtd Splg Sts Thm Fre 2 Rit

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"My first graders are so full of stories! If only there were some way for them to write," I used to fantasize often, "... but they can't spell." My insistence on "correct" spelling had long been a constraint on my students' writing, yet telling them how to spell every word was also out of the question. Then I learned about invented spelling, children's own "best guess" at spelling based on what they know about language. When I learned about this natural, developmental aspect of children's language growth, I knew I had found the key to set my first graders free to write their own stories and more.

This paper briefly reviews what researchers have learned about young children's invented spelling and explores what I learned about my first graders' use of their knowledge about language and their natural growth through their invented spelling in their daily dialogue journal writing. How the use of invented spelling sets children free to write and ways to foster this natural development in writing are also described.

RESEARCH

Researchers have found that even before children enter school, they have much knowledge about language, and many young children who have been in a supportive environment can already write using invented spelling (Bissex, 1980; Chomsky, 1971, 1979; Clay, 1975; Harste, Woodward, & Burke, 1984; Read, 1971). Chomsky and Clay found that young children learn to

write before they learn to read and that children use what they already know about the written language to invent their own spellings. Read found that all of the early readers in his study were also early writers who used invented spellings to represent their written communications. Bissex and Harste et al. further documented the earlier findings about children's use of invented spelling by studying young children's writing and spelling.

Many researchers have examined the developmental aspects of spelling growth in young children (e.g., Beers, 1980; Clarke, 1988; Gentry, 1984; Giacobbe, 1981; Henderson, 1981; Morris, 1980; Read, 1975; Wood, 1982). These and other researchers found that young children go through predictable, developmental stages in learning standard spelling, particularly as their underlying concepts about words grow more sophisticated (Henderson & Beers, 1980; Hodges, 1982), and that children use certain spelling strategies (Chomsky, 1971; Holbrook, 1983; Read, 1971) that change as they progress through the spelling development stages.

STAGES OF INVENTED SPELLING

Temple, Nathan, Burris, and Temple (1988) have named the stages of invented spelling through which children naturally grow as *Scribbling, Prephonemic, Early Phonemic, Letter Name, Transitional,* and *Correct.* Spelling ability develops through these stages of invention with a greater and more sophisticated understanding of the relationship between written and spoken language at each stage. Scribbling is considered the first stage in beginning spelling. Here the child connects meaning to the marks on the page, indicating an understanding that such marks convey a message. For example, a three-year old may scribble on a piece of paper, show it to an adult, and say, "This says, 'My name is Jack.'"

The next stage, Prephonemic, usually appears between the ages of three and five and seems typical of many kindergartners. In this stage, children can write the letters of the alphabet but have not yet connected letters and sounds. A beginning first grader who was a prephonemic speller wrote in his journal, *aiupnpabe,* which he translated as "It's raining." Children in the Prephonemic stage often use illustrations to augment their written message. They may also have a difficult time remembering what they have written. For example, one first grader wrote an entire page full of unspaced capital letters and drew a picture of what appeared to be a party in her journal. She was initially unable to remember what she had written, but when I drew her attention to her illustration, she recalled that she had written about her brother's birthday party.

Many children enter first grade as Early Phonemic spellers who have begun to make the connection between letters and sounds. They still have difficulty segmenting words into isolated sounds, however, often using one or two letters to represent a whole word. For example, ILKTP was one child's early phonemic spelling of "I like to play." Children at this stage of

spelling development still do not have a firm concept of word (Clay, 1975), which is an early step in beginning reading (Henderson, 1981; Morris, 1980). This vague concept of word is often characterized by the absence of space between words in their writing. An example of a first grader's Early Phonemic spelling is "WrGNhHLwPttDWrhVLSvF" for "We're gonna have a Halloween party. We're having lots of fun."

In the Letter Name stage of spelling development, the concept of word stabilizes. Some children will signal their new understanding by placing some kind of mark between each word to denote a character space. For example, one Letter Name speller wrote, "I,Can,t,Wet,Til. Cirs,MiS." ("I can't wait 'til Christmas.") Letter Name spellers have also developed the ability to use vowels (although only as place holders) and to segment words into sounds. Often, the name of a letter (e.g., *r*) is used for a word (e.g., *are*). An example is found in this journal entry: "Tere r lots of thengs to do on Hallodays. Tate is y I like Hallodays. Hallodays r the best thing." Most young writers grow through this stage of spelling development during first grade as they learn to read and are exposed to an increasing amount of print that stimulates their visual memory for spelling. Another characteristic of Letter Name spellers is the use of letter *H* for the sounds */sh/* and */ch/*. For example, Dan drew a picture of me, then captioned it with "This is the bast frist grad tehr." ("This is the best first grade teacher.")

By the end of first grade and into second grade, if children are supported in their writing development, most reach the Transitional stage of spelling development. Here most easy words are spelled correctly and short vowels are used with increasing accuracy. Spelling becomes easy to read: "I have been haveing a good time. Iv, been doing lot's of thing's. I went too Ceader Point. Me and dad went on this water ride. We got sokin wet."

The Correct stage of spelling development in which spelling closely matches adult standards is usually reached by the end of third grade (Gentry, 1984). One first grader wrote in her journal in May, "My Dad has a wild cat. At night my Dad's cat jump's over my face and play's with my feet. I like my Dad's cat!" I found this child's use of apostrophes typical of emergent writers' tendency to overgeneralize about new learnings. As they learn new aspects of writing, they overuse the new learning, but only temporarily.

GROWTH IN SPELLING

"Will they ever learn to spell correctly?" is a question often asked by teachers and parents concerned about the advisability of encouraging children to write with invented spelling. Researchers assure us that children do learn to spell with increasing accuracy when they have many opportunities to write in a supportive environment in which they are encouraged to trust their own knowledge, take risks in writing, and write for ever-widening audiences (Hansen, Newkirk, & Graves, 1985; Graves & Stuart, 1985; Wood, 1982).

Armed with these assurances from researchers, I decided to have my first graders write daily in journals and to closely observe their spelling development. Their development is clearly documented and easily examined in their journal writing. (All names are pseudonyms.) For example, on October 22, Laura wrote in her journal:

I ma Bea Bfi Day to Bea Btrfi I No the PPL kfi so I BtD it is fanto BetD Dal to Betd (I'm a beautiful butterfly. Do you like to be a beautiful butterfly? I know that people can't fly, so I pretend. It is fun to pretend. Do you like to pretend?)

Laura seems to be in transition between the Early Phonemic (e.g., *Dal* for *do you like*) and the Letter Name (e.g., *PPL* for *people*) stages of spelling development at this time.

One day in January Laura wrote:

I like Ranbos Tha aur Calrfl my my wow tah Hav a lot u CoLoRS (I like rainbows. They are colorful. My, my! Wow! They have a lot of colors!)

Although Laura still has occasional difficulty getting the letters in the correct order, she seems to have moved to the Letter Name stage (e.g., *RanbOS* for *rainbows*). By May, she seemed to be growing into the Transitional stage (e.g., *feeleing*) as she wrote about her mom (recovering from an operation):

My mom is feeleing betr. I take good car av her. I rele like my mom. I love you mommy. You are cinde. Ples get betr mom becas I wonto get on yor lap.

Laura's journal entries clearly show how her spelling developed naturally during her nine months of writing in first grade, gaining in both accuracy and control.

Ray's spelling development can also be seen in his journal entries. He also experienced some difficulty getting the letters in the right order as can be seen in one of his October entries: "I like Hte sccqyos we med it is pyet" ("I like the scarecrows we made. It is pretty.")

Ray's speech impediment is revealed in the word *pretty* that Ray pronounced "pwetty" and spelled "pyet," using the letter name *y* to represent the sound */w/*. By January, Ray seemed to be growing toward the Transitional stage: "I wonder about whathe fewcher is gunna look like in the fewcher."

Clearly into the Transitional and Correct stages, one day in May, Ray wrote "I like my Journal. I like writing in it. Pluss I have of prooved [improved] with everything."

Like Laura, Ray's spelling development is obvious through his journal entries. He has moved naturally through the stages of spelling growth, gaining in accuracy and control of his use of the language.

Although Cindy used some vowels in her first journal entry, her spelling was clearly in the Early Phonemic stage (e.g., "AhFnfn" for "am having fun"): "I AhFnfn mIfrisahfnabAb" ("I am having fun. My friend['s mom] is having a baby.")

By January, however, Cindy had grown considerably as revealed in her Letter Name (e.g., *chicin* for *chicken*) and Transitional/Correct spelling: "My fafrit taste Is Pesa and chicin My fofrit nuBr Is six."

By May, Cindy seemed to have reached adult standards in spelling accuracy (although she still has more to learn regarding the use of capital letters): "I Like My Journal. It is nice. I Like to Read It." Like her classmates' writing, Cindy's journal writing indicates her natural growth in spelling.

The three students whose spelling development is documented here were average students in this first-grade group. Although their rates and stages of spelling development differed, I found that they all grew naturally in their ability to spell with accuracy and control during their first-grade experiences in journal writing.

HOW INVENTED SPELLING SETS CHILDREN FREE TO WRITE

Invented spelling sets children free to write because they can write on any subject and use any words they know. For example, in their dialogue journals, my first graders have used such words as *JIMMASSTICXS* (*gymnastics*), *DRACKELU* (*Dracula*), *ESPCHLE* (*especially*), *AXULADER* (*escalator*), and *CONGRAGALACHENS* (*congratulations*), words that they would have been unable to use had they been required to use standard spelling.

Invented spelling sets children free to write more fluently (Clarke, 1988) and to attend to their messages rather than to the mechanical aspects of writing (Graves & Stuart, 1985). They write on a wide variety of topics with a wide variety of words. For example, one of my first graders wrote at Christmastime about her brother who had leukemia:

> My brother is having a hard time. He has a dazese. It is verry hard on him. I feel sad for him. I hate to see it like at a time like tise. I wishe he had nevr had a dazese. Tate is the worst I evre seen. But I am glad hese home. He taxe pillse to help hime.

Children develop positive self-concepts as readers (Chomsky, 1979), as authors (Calkins, 1986; Holbrook, 1983), and as language learners when they are set free to explore, play with, and internalize language by inventing their own spellings (Hansen et al., 1985). Furthermore, writing with invented spelling also reinforces and expands children's knowledge of phonics and word recognition (Clarke, 1988).

HOW TO FOSTER INVENTED SPELLING

Graves and Stuart (1985) found that 90% of children believe they can write when they first come to school. I decided to capitalize on that perception by encouraging writing daily, beginning the very first day of school (Calkins, 1986; Hansen et al., 1985). Teachers set the tone of the classroom by what they do, not by what they say, so I frequently modeled every aspect of the writing process. I also developed a respectful, accepting, nonjudgmental

attitude, and enjoyed and responded to the content of children's writing rather than correcting "mistakes" (Chomsky, 1971). For example, I responded in writing to the content of the children's journal entries by modeling standard spelling and correct sentence structure, capitalization, and punctuation.

I tried to consider the children's frame of reference without imposing adult standards before the children were ready (Hodges, 1982; Holbrook, 1983). However, I praised standard spellings whenever they appeared, calling children's attention to their increasing accuracy in spelling (and other aspects of writing such as capitalization and punctuation) because these approximations are signs of growth (Graves & Stuart, 1985). I encouraged children to make their "best guess" in spelling, and left spelling and writing decisions up to them since the writing belonged to them (Chomsky, 1971). In our class, correction of spelling and other mechanics of writing were reserved for the editing stage of the writing process (Calkins, 1986; Graves & Stuart, 1985).

I learned that the classroom environment can also foster growth in spelling and writing development. I tried to provide for many daily opportunities for children to be actively involved in functional and meaningful speaking, reading, writing, and listening experiences (Anderson, 1985; Zutell, 1980). Our classroom was replete with a wide variety of printed materials (Wood, 1982), such as books, magazines, newspapers, signs, directions, instructions, and so forth, to which children had free access. The local public library was my most valuable source of materials.

As Temple et al. (1988) suggested, I had boxes containing writing folders (one for each child), other boxes and containers for a wide variety of writing supplies, displays of student-authored books, bulletin boards containing children's writings, a typewriter or computer for final copies, areas set aside for conferencing and collaborating, and an author's chair where authors sit to share their final copies. I believe it was ultimately the atmosphere of acceptance and respect that most fostered my students' willingness to take risks and play with language by inventing their spelling.

Certain writing activities seem to foster spelling development. Daily writing and language experience activities provide a variety of natural opportunities for children to think about how words might be spelled, to practice what they are learning about spelling and other aspects of writing, and to see spelling and writing modeled by the teacher (Gentry, 1984). Word sorts in which words are put into categories or word families are also helpful in fostering spelling growth (Beers, 1980; Gentry, 1984; Wood, 1982). Holbrook (1983) suggested other activities that encourage beginning writers. These include writing with a partner, journal writing, reading aloud to the children, and writing personal messages. Displaying and sharing children's writing also seems to foster its development, especially with expanded audiences for their writing (Calkins, 1986; Graves & Stuart, 1985; Hansen et al., 1985; Kamii & Randazzo, 1985).

SUMMARY

Invented spelling is a natural, developmental aspect of children's language growth. The first graders' journal writing examined here indicates that when they are in a conducive, literate environment where their approximations are encouraged, accepted, and respected, children confidently use what they know about language. Invented spellings are used to write their stories and convey a variety of meaningful messages for responsive audiences. Furthermore, as the children write daily in their journals, they grow through certain predictable stages in normal spelling development, use similar spelling strategies, and, over time, internalize many standard spellings. Children are able to use a wide variety of words to write with fluency and confidence with their invented spellings. A literate classroom environment and daily writing activities can foster much growth in writing, but the teacher's beliefs, behaviors, and attitudes are even more critical. Invented spelling does set children free to develop as writers and to learn language the natural way.

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Methods and Approaches for Fostering Reading Fluency in Classroom and Clinic

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Reading fluency, the ability of readers to read quickly, accurately, and effortlessly with good expression and phrasing, is viewed by many reading experts to be essential for proficient reading. Ironically, however, reading fluency instruction is, more often than not, a neglected part of many school reading programs (Allington, 1983; Anderson, 1981). The scope and sequence charts of most basal reading programs, for example, and the reading curriculum guides of most school systems give scant attention to the issue of reading fluency development.

Nevertheless, instructional research of the past 10 years has identified several methods aimed at improving fluency that have the added outcome of positively affecting overall reading performance. Despite the fact that the methods are appropriate for classroom and/or clinic use, few have found their way into actual instruction on a regular basis and those that are employed may not be used with the intention of improving fluency.

The purpose of this paper, then, is to identify, describe, and review the effectiveness of those methods and approaches that have been shown to have promise for improving reading fluency. Although the methods and approaches are categorized into those most appropriate for clinical settings and those most appropriate for classroom reading instruction, we believe that with some modification, the methods and approaches to fluency development described here can be made appropriate and effective for both settings.

FLUENCY METHODS FOR THE CLINIC

In reading clinic situations, those readers who are nonfluent have read in a slow, choppy, word-by-word manner for an extended period of time. Often they are placed in classroom texts that are too difficult (Gambrell, Wilson, & Gantt, 1981) and are asked to read fewer words in both the classroom and resource rooms than average students (Allington, 1977). In light of their status as nonfluent readers, several instructional techniques have proven to be powerful interventions in the reading clinic. This section will present an overall instructional framework of explaining and modeling fluency and then focus on three techniques that have been used successfully with poor readers: repeated readings, echo reading, and chunking.

Explaining and Modeling Fluent Reading

Techniques vary for working with remedial readers in a reading clinic setting, but strategic teaching of fluent reading has generally included explaining and modeling fluent reading. First, the teacher talks about what fluent reading is and what it is not. Using definitions based on the research of Allington (1983) and Zutell (1988), the teacher explains that

Fluent Reading is —

Reading in longer phrases with pauses representing meaningful thoughts. There are some repetitions but these are used to correct phrasing and expression errors. Generally, there is a good sense of expression and intonation.

Fluent Reading is not —

Reading word-by-word with numerous pauses. The reader pauses to sound out words and repeats words and phrases to regain meaning. There is a lack of intonation and expression.

This establishes the goal of the strategy lesson. Then the teacher asks the student to think about the possible meaning of the selection and explains that by thinking about meaning, he or she can predict what the author is going to say. The student is then asked to read the selection using a specified technique: repeated readings, echo reading, or chunking. During instruction, the teacher refocuses the student's attention on constructing meaning so reading sounds like oral language. When necessary, the teacher models fluency by reading aloud the section in question using appropriate stress and intonation. At the end of the lesson, the student and teacher evaluate the student's fluency. A simple chart of fluent reading behavior (below) is

HOW I READ TODAY	M	T	W	Th	F
Fluently in phrases					
Some phrases					
Choppy with pauses					
Slowly word-by-word					

reviewed with the student. The student thinks about his or her reading performance during the session and then rates how he or she read without teacher assistance.

In the reading clinic setting, the explanation and modeling of fluent reading has proven an effective procedure for improving fluent oral reading. It combines both how to read fluently with an understanding of what fluent reading is; therefore, the students are put in control of changing their reading behavior.

Repeated Reading

The method of repeated reading (Samuels, 1979) focuses on speed and accuracy. Readers select a text to read aloud to the teacher. The teacher records reading rate and marks errors on a copy of the text. After the first reading, the student and teacher chart reading rate and number of errors on a graph. Next students rehearse the selection by themselves, focusing on reading faster. When students are ready, they reread the selection while the teacher records reading rate and marks errors. Again, the student and teacher chart reading rate and number of errors on the same graph, discussing the increase in rate and the decrease in errors. Since reading rate and accuracy are related to reading fluency, students quickly become more fluent readers and move to more difficult text.

Research by Moyer (1982) and Dowhower (1987) has demonstrated the effectiveness of this approach. Moyer (1982) used the repeated reading method with a 30-year-old man who suffered reading loss as a result of cerebral trauma following surgery. Initially, the patient could decode most words letter by letter but lacked fluent reading. Using the repeated reading technique over a 12-week period, a gain of 40% to 50% reading rate was achieved. A year later the rate was maintained.

Dowhower (1987) studied transitional second-grade readers who were nonfluent. Using basal reader stories, the students reread a series of selections from the graded basal texts. As well as increasing reading rate, Dowhower found that repeated reading enhanced children's ability to segment text into meaningful phrases. The word-by-word readers began to read in longer phrases and with more expression.

In the clinic, this technique has been adapted so that the emphasis is on accuracy and fluency rather than rate. Readers select from texts recommended by the teacher, thus providing a series of selections that keep difficulty constant. As the students read the text, the teacher marks errors and rates fluency using a four-point scale developed by Zutell (1988). The errors and fluency rating are charted by the student and teacher. Fluent reading is discussed as are the variables that influence fluency. After the initial reading, rather than assigning independent rereading, the teacher intervenes to assist the student in developing more fluent reading. After the intervention, a final rereading is monitored by the teacher marking errors and rating fluency. Progress toward fluent reading is discussed.

The effectiveness of repeated reading results from the familiarity of the text developed through repeated practice. Also, the student graphically sees how rereading a text increases fluent reading. Ideally, this will lead to an understanding of how topic knowledge increases fluency.

Echo Reading

This is a way to guide oral reading in order to teach children that what is read should sound like language (Aulls, 1982). The teacher begins by reading a sentence or group of sentences, modeling phrasing and intonation. The student then repeats the teacher's model as closely as possible. This procedure continues through the targeted selection. By listening to the teacher's model and then repeating it as it was read, the student hears and sees how oral and written language are related.

Research by Aulls (1977) showed that using the echo reading technique with less skilled readers was effective over time. In the reading clinic, echo reading is often combined with other techniques to intensify the effect of the technique. Echo reading is used as an intervention with repeated reading when the teacher echo reads problem sentences. At other times, it is combined with chunking to model how to parse sentences into thought units.

The key to echo reading is the model of fluent reading provided by the teacher. Breaking the habit of word-by-word reading is sometimes extremely difficult, and echo reading bridges the gap for students who need the support of a teacher to actually hear fluent reading.

Chunking

Chunking is a way to demonstrate visually how to segment text into meaningful thought units. Either the teacher marks the phrases on the text, or the text is reproduced with spaces between the phrases. The teacher and the students discuss segmenting texts into meaningful phrases. Then the teacher models a sentence or two and the students read the text using the phrases.

In a reading clinic setting, Allington (1983) found that using chunking, where the clinician models marking the phrase boundaries lightly in the reading material and then encourages students to read the text in phrases, produced more fluent reading in less skilled readers. Research by Brozo, Schmelze, and Spires (1983) as well as Mason and Kendall (1979) has shown that chunking phrases improves reading comprehension. In these studies, the students read texts in which the phrases had been marked to indicate thought units. This procedure helped the students focus less on single words and more on phrases of meaning.

When using chunking in the reading clinic, the text remains intact as students mark their phrases for reading aloud. The teacher and student discuss the meaning of the selection, talk about the phrasing the student

used, and discuss that a particular chunk of language represents a thought. If necessary, the teacher models chunking the text by marking phrases on a copy of the text. Then the student rereads the selection while the teacher marks the phrasing. The sequence might look like the following:

Text: The young woman liked to ski down the mountain.
Student reading: The/ young/ woman/ liked/ to/ ski/ down/ the/ mountain.
Teaching Modeling: The young woman/ liked to ski/ down the mountain.
Student Echoing: The young woman/ liked to/ ski down/ the mountain.
Teaching Comment: I like the way you chunked "ski down." Did it make sense to you to read it that way?

The effectiveness of chunking is found in the discussion about how phrases of language represent thought. Nonfluent readers are often text bound (Allington, 1983) and do not understand that groups of words represent thoughts. They have overrelied on the text to provide both the words and the meaning and have failed to use reader–based inferencing while reading. Chunking is a logical way to explain how readers combine both the text and background knowledge as they read.

FLUENCY APPROACHES FOR THE CLASSROOM

Reading-While-Listening

The term *reading-while-listening* refers to the reader's task of reading a text while simultaneously listening to an oral rendition of the text. The most common form of reading-while-listening involves the reader listening to a taperecorded version of the text while reading. Since students can engage in the activity independently, usually in a reading or listening center, reading-while-listening can easily be integrated into the regular classroom.

Research by Chomsky (1976) and Carbo (1978) has demonstrated the effectiveness of the approach. Chomsky (1976) studied third-grade students who were reading significantly below grade level. The students were instructed to read the text while simultaneously listening to a tape recording of it and to practice reading the text until they could read it independently and with fluency. When students achieved fluency on that text, instruction was directed at analyzing the word and letter components of the text. Chomsky reported that students made substantial progress in reading by using this approach.

Carbo (1978) reported similar gains with second- through sixth-grade learning disabled students. Over a nine-month period during which the approach was employed, students made average gains of 17 months in word recognition.

Rasinski (in press) found that students in a reading-while-listening program made gains in fluency that were equivalent to those made in a repeated readings regimen.

The most difficult hurdle in implementing a reading-while-listening program is the development of enough taperecorded texts to satisfy the many interests in the classroom. Although commercially prepared tapes are available, the background noises and special effects embedded in the tapes may be distracting to many students. The best tapes should feature fluent reading and no distracting sounds or noises. The production of tapes by one teacher can be an overwhelming task. However, using classroom aides, parent volunteers, and students who are fluent in reading as readers can significantly ease this burden.

The Oral Recitation Lesson

Hoffman (1987) developed the oral recitation lesson as a way to include fluency instruction within the low reading group of a second-grade basal-oriented classroom routine. Significant features of the oral recitation lesson include teacher modeling, repeated readings, and explicit classroom discussion of what is involved in fluent reading.

The oral recitation lesson has two major segments. The first segment is further divided into three subroutines. First the teacher reads, orally and fluently, a story from the basal textbook to the class. This is followed by a discussion and analysis of the story, culminating in the construction of a story map that includes many basic elements of the story. At this point in the lesson, comprehension is the major concern.

Next the teacher works with the class to improve oral reading fluency. Again, the teacher models segments of the text, discusses the elements of fluent reading with the class, and invites students, individually and in chorus, to read the text segment. The instruction begins with shorter text segments and moves toward longer pieces of text as the students become more fluent and confident in their reading. Hoffman notes that in this part of the lesson, the goal is fluent and expressive reading.

The third subroutine involves student performance of the texts. Students select portions of a text they have practiced and read it aloud for a group of classmates. Students receive positive feedback from the audience after the performance.

The focus of the second segment of the oral recitation lesson is independent practice. For 10 minutes each day, students practice reading, in a "soft" voice, the stories covered in the first segment of the lesson. When the second-grade students are able to read a story at 98% or better word recognition accuracy, and at a rate of at least 75 words per minute, they are permitted to move on to another story.

Qualitative observations of the implementation of the lessons (Hoffman, 1987) suggest some positive outcomes. Student reading performance appeared to shift from a focus on individual word identification to a focus on comprehension of the text. Student miscue patterns began to reflect the miscue patterns of more fluent readers.

Paired Repeated Reading

The paired repeated reading approach (Koskinen & Blum, 1986) capitalizes on the method of repeated readings and on cooperative pairing of students. Designed to take no more than 15 minutes per lesson, each student in the class chooses a reading selection of approximately 50–75 words from current classroom reading material that is easy for him or her to read. After each child reads the passage silently, one reader will read aloud to a partner three times. Then the partner reads his or her passage three times to the first child. After the second and third oral reading, the listener provides positive feedback to the reader, focusing on improvements in accuracy, flow, expression, or some other factor related to oral reading. The reader also evaluates his or her own reading after each of the three readings.

Koskinen and Blum (1986) note that it is important for the teacher to help students understand the rationale for the repeated readings and become sensitive to improvements in their own reading. Moreover, the teacher needs to help students become responsive and supportive listeners. This is done through role modeling, direct instruction, and practice.

Koskinen and Blum (1984, 1986) report that implementation of paired repeated reading has been singularly positive. In their 1984 study, for example, they report significant improvements in oral reading fluency and semantically appropriate miscues for below-average third-grade readers in a paired repeated reading regimen when compared with a similar group of subjects involved in study activities related to their basal reading stories.

CONCLUSION

Although it is clear that fluency is an aspect of effective reading, only recently has attention been devoted to developing fluency in either the classroom or clinic. This paper has identified several instructional methods for both settings that can improve oral reading fluency and overall reading performance.

These methods share some important characteristics. First, rather than whisk children through unfamiliar texts each day, these methods focus on reading selections repeatedly so that the reading becomes expressive and fluent. Second, these methods focus on fluent oral reading and meaning construction rather than word identification. Third, the methods involve contextual reading of extended text rather than isolated word activities as found in many workbooks. Finally, most of the methods involve some model for fluent reading. This model could be the taped story, the teacher, or a peer.

During the last 10 years, new methods of developing reading fluency have been developed and proven effective. Teachers and teacher educators need to (1) be aware of behaviors and methods that affect fluency, (2) discuss their importance with students, (3) model fluent reading behavior in the classroom and clinics and, when necessary, (4) explain how fluency works.

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Providing Mediated Instruction to Enhance Students' Note Taking and Reading Comprehension

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The purpose of this research was to examine the effect of different note-taking strategies on students' ability to write story retellings. Middle school students were encouraged to rehearse and elaborate on story ideas through group verbalization (mediated) note-taking and concept mapping strategies or through student-generated note-taking strategies combined with either concept mapping or a story grammar frame. Although research on note taking to aid reading comprehension has produced mixed results, Weinstein and Mayer (1986) view note taking as a complex rehearsal task that is effective when it allows time for learners to select and practice information-gathering strategies. Note taking may be beneficial because it aids learners in directing attention to specific text ideas (Anderson & Armbruster, 1984; Weinstein & Mayer, 1986) and allows learners to reflect on ideas presented in the meaningful context of narrative or expository passages.

Recording group verbalizations during reading, another form of note taking, encourages a group of students to share and rehearse information it selects from the text. Verbalizing one's thoughts during the reading process (think-alouds) or the writing process (compose-alouds) has been associated with facilitating recall and organization of written compositions (Easton, 1982; Fagan, 1981; Hare & Smith, 1982; Hayes & Flower, 1980; Lytle, 1985; Newell, 1984; Olshavsky, 1976–1977; Schoenfeld, 1982; Schumacher, 1983; Strahan, 1982). However, as suggested by Weinstein and Mayer (1986) and noted in our work (Risko & Smartt, 1982) with think-alouds, rehearsal strategies alone do not seem to help students establish internal connections

between text ideas or relate text information to prior knowledge. We found that low-achieving readers, in particular, are often unable to differentiate important from less important ideas or to identify central concepts required for understanding text ideas.

Informal observations in Alice Patterson's middle school classes indicated that on many comprehension tasks, her students seemed unable to differentiate major and minor text ideas, to organize and relate text ideas to central themes, or to access relevant prior knowledge that could aid their comprehension. Often these students, who used rich language to write well-developed stories following story grammar frames, failed to use what they knew about stories when it would help their organization and comprehension of story ideas. These students displayed what Whitehead (1929) refers to as *inert* or *celibate knowledge*, an inability to use "known" information when it is needed to solve new and relevant problems.

Our findings plus an analysis of cognitive research on thinking and problem solving (e.g., Bransford, Sherwood, Vye, & Rieser, 1986; Vygotsky, 1978) suggest that mediated learning activities can enhance effects of rehearsal strategies. Cognitive researchers (e.g., Bransford, Sherwood, & Hasselbring, 1988) indicate that mediated learning in classrooms should occur within natural learning contexts, much like shared learning experiences that occur between parents and children at home. Observations within natural learning contexts (Chapman, 1978) suggest that children have rich opportunities for using contextual cues to interpret the language and actions of others. Further, parents who act as mediators by helping their children make sense of experiences can influence cognitive development (Fuerstein, 1979; Vygotsky, 1978) and meaningful learning (Chapman, 1978). Similarly, teachers who share learning experiences with students can serve as mediators by helping students separate relevant from irrelevant information, prompting students to anticipate events, and helping them connect parts of their experiences or ask questions about the text they will read.

Theorists such as Fuerstein (1979) and Vygotsky (1978) argue that some forms of mediation may be more effective than others in developing thinking skills. They suggest that instead of leading fact-oriented discussions that put an emphasis on right answers to predetermined questions, effective mediators should focus attention on processes, such as selecting and evaluating text ideas, needed for reading comprehension. Instead of telling students answers and/or how answers are derived, effective mediators encourage students' decision making about the importance of ideas while providing instructional feedback that prompts students' critical thinking (Bransford, Franks, Vye, & Sherwood, 1989). Novak and Gowin (1984) indicate that teachers can provide support for students' learning by helping them make decisions about important text ideas and construct meaningful connections among text ideas through activities such as concept mapping.

We believe, therefore, that rehearsal strategies may allow students time to focus attention on ideas within a meaningful context, but mediated learning

activities associated with rehearsal can provide students with multiple elaborations on the content that may enhance the quality of students' comprehension (Anderson, 1983; Anderson & Reder, 1979; Risko & Alvarez, 1986). In a previous study (Risko & Patterson, 1989), we found that teacher and student verbalizations (note taking) during reading when combined with a focus on central thematic information enhanced low-achieving readers' retelling of a complicated and unfamiliar text passage. We hypothesized that students' retellings were enhanced because this note-taking strategy provided a shared context for learning—a context in which teachers and students discussed common contextual information and elaborated upon each other's ideas.

We designed this current study to examine the effects of our note-taking strategy, developed to mediate students' learning in a language-rich discussion activity, on middle school students' written retellings. We compared a mediated note-taking strategy to students' independent use of notes.

This study builds on our former study in two ways. First, students across groups read a unit of text passages written by the same author. We provided this condition to examine whether a mediated learning context was necessary when students read texts containing familiar structure and content. Second, students in the control group were provided with a story frame outline to aid their note taking. In our previous study, control students were asked to take notes and reflect on these notes. They were given examples of a teacher's notes on a similar passage, but they were not given a frame to follow to aid their selection of text ideas.

We analyzed written retellings of students participating in (1) a group verbalization and concept mapping strategy, (2) a variation of the group verbalization strategy in which a prereading activity (thematic organizer) was added to highlight central theme information, (3) a note-taking strategy in which the prereading activity was added to students' independent generation of notes and concept mapping, and (4) a note-taking strategy in which students followed a story frame to generate notes and answered a set of postreading reflection questions. Across all conditions, students were asked to watch a video on Mark Twain, read a Mark Twain biography, and read five Mark Twain narratives. Within the first three conditions, instruction highlighted the related information across narratives and the biography. For example, concepts across stories were related on the thematic organizer provided for two of the groups. In the third group, the teacher prompted students to discuss how story ideas were similar. For the fourth group, each text was treated discretely, with no explicit connectives being provided.

METHOD

Subjects

The participants were 60 eighth-grade students enrolled in an inner-city school. Three complete language arts classes were selected. Prior to this

study, all students had received seven months of language arts instruction that involved them in taking and organizing text notes using either story grammar outlines or concept maps. Students were judged by their language arts teachers to be proficient in the use of these two strategies.

Materials

During an introductory session, all students watched a 15-minute autobiographical video in which Hal Holbrook, portraying Mark Twain, talked about Twain's life and events that influenced Twain's writing. Students read "A Biography of Mark Twain" (2 pages), "The Cat and the Pain Killer" (5 pages), "Cub Pilot on the Mississippi" (7 pages), "The Man that Corrupted Hadleyburg" (12 pages), "Edward Mills and George Benton" (5 pages), and "The Californian's Tale" (4 pages). These passages were taken from *Reading Anthology* (Scholastic Books, Scope Series), a supplementary text for this school. Students had not read these passages prior to our study.

Photocopies of entire passages with illustrations were read by the students. Prior to the study, the investigators divided each story into three meaningful parts determined by the presentation of structural elements of the story. For example, the first pause occurred after the setting and the protagonists' goal had been introduced. The biography and each story were divided into approximately three equivalent units with slashes placed at the end of each unit.

Procedure

Students were assigned to one of the four treatment groups using a stratified randomization procedure according to percentile scores (reading subtest, Stanford Achievement Test). Each group met for seven days. The first day was an introductory session for the following days. Four teachers were randomly assigned to one of the intervention groups and worked with this group throughout the study. The lessons for each day were scripted for consistency across all groups and an independent observer evaluated each teacher's ability to follow the script. Observational data revealed 99% agreement with script guidelines. The same materials were used with all groups. Data were analyzed for day 7, when "The Californian's Tale" was read. All other stories and the biography were assigned to each group in random order on the preceding days. Time was held constant across all group activities (i.e., 25 minutes were assigned to story reading and pauses for rehearsal, 10 minutes were assigned to concept mapping or reflection questions, and 10 minutes were allowed for writing retellings).

During the introductory session, each group viewed the Mark Twain video. Three general questions (Who was Mark Twain? What can you tell us about Mark Twain? What did Mark Twain write?) guided the postviewing discussion. On the second and subsequent days, the students and teacher in each group read the assigned text passage and practiced the assigned note-taking strategy.

In the mediated group (group verbalization and concept mapping), the students and teacher read the text parts silently. They verbalized their thoughts during the preselected pauses in the story, and the teacher recorded all responses on an overhead transparency. This procedure was followed for the three sections of the text, with verbalized ideas placed on a new transparency each time. After the story was completed, the teacher and students reviewed ideas by taking turns reading ideas from all transparencies. Next, the teacher asked students to discuss and identify one idea that best told what the story was about. The teacher wrote this on the board and drew a circle around it. The teacher asked students to identify the next important ideas and to explain how they were related to the idea in the first circle. She continued in this manner until ideas generated by students were mapped at their respective, hierarchical levels, following the procedure identified by Novak and Gowin (1984). When students and/or the teacher disagreed with the selection of story ideas, discussion continued until a consensus was reached. This procedure was followed on each subsequent day.

The mediated theme-focused group followed the same procedure as the first group, with the exception that a thematic organizer (Risko & Alvarez, 1986) was provided prior to reading. The content of the organizer connected story information to general experiences believed to be relevant to students' prior knowledge (e.g., times when they may have been treated unfairly) and required students to make predictions about what they would read. After reading the organizer and writing their predictions, the students and teacher followed the group verbalization strategy described above.

In the theme-focused, independent generation of notes group, the students were asked to complete the thematic organizer activity as described above. Then the students were asked to read each passage silently and stop at each slash mark to write important ideas. After reading and note taking were completed, students were asked to construct a concept map of the text ideas. The thematic organizer, note-taking, and mapping activities were completed independently by each student. This same procedure was followed on each day.

In the story outline, independent generation of notes group, the teacher and students explained how they would use a story grammar outline (a sheet of paper with headings: setting, story problem/goal, events, resolution) to identify and write story information when they paused at each of the three slash marks. Following the reading, students were asked to reflect on their notes by answering a set of questions requiring story structure information (Where did this story take place? What was the main character's problem?). Students answered these questions independently in writing. On each subsequent day, students were reminded of the procedure for the lesson and asked to independently complete their note taking and reflection.

After completing its respective note-taking strategy, each group was asked to write a retelling by following this directive: "Write everything you would say to tell this story to someone who has not read it. Be as complete as possible in your retelling." Since we were interested in examining students' comprehension instead of memory, students were told that they could refer to their notes as they wrote their retellings.

Scoring

The students' retellings were analyzed using a variation of Morrow's (1986) scoring system to evaluate students' generation of well-formed story retellings. Each retelling was scored by two independent raters using Morrow's procedure for four categories of story grammar: setting, theme, plot episodes, and resolution. Instead of evaluating each retelling for inclusion of sequence (a fifth category suggested by Morrow), we scored each retelling for story coherence using the procedure described in the Appendix. Raw scores for all five categories were adjusted to equal 10 by placing raw scores over maximum scores and multiplying by 10 (see Morrow, 1986). Interrater reliability for each analysis was within the range of 0.92 to 0.95.

RESULTS

Retelling performance on the last passage used during the intervention was examined. Each of three sets of data was analyzed using a one-way analysis of variance. The data for each analysis included means and standard deviations for (1) total retelling scores, (2) story component scores (i.e., setting, theme, plot episodes, resolution, and story unity), and (3) total retelling scores for high and low achieving students.

The analysis of students' retellings using total scores revealed a significant group effect, $F(3, 48) = 3.32$ ($p < .05$). See Table 1 for means and standard deviations for the total retelling scores. A Newman Keuls post hoc test revealed that the group means for the mediated theme focus, mediated,

TABLE 1
Means and Standard Deviations for Students' Written Retelling Units on Treatment Passage

Group	*n*	*M*	*SD*
Mediated theme focus	16	24.7*	9.2
Mediated	16	27.5*	12.1
Individual notes theme focus	12	23.7*	14.1
Individual notes story outline	8	12.2	9.9

Maximum score possible for retelling was 50.
*$p < .05$, group 1, 2, 3>4

and independent notes with theme focus groups were significantly higher than the mean of the group who took independent notes while following a story grammar outline ($p < .05$).

Since a significant treatment effect occurred, the data were analyzed using a multiple analysis of variance to examine performance by group on each of the story components. See Table 2 for means and standard deviations for each of the component scores. The analysis revealed a significant group effect, $T2(15,128) = 0.62$ ($p < .05$). The univariate F-tests revealed that the mean scores for the first three groups were significantly better than the fourth group in the areas of plot episodes, $F(3, 48) = 4.2$ ($p < .01$), and story unity, $F(3, 48) = 3.7$ ($p < .05$). Means in all components were higher for these three groups than for the fourth group, but only two were statistically significant.

In the third analysis, total retelling scores for achieving students (percentile scores above 30 on reading achievement test) and low-achieving students (percentile scores at or below 30 on reading achievement test) were analyzed. See Table 3 for means and standard deviations. The analysis revealed a significant group effect, $F(3, 27) = 5.69$ ($p < .01$) for the achieving group of students. The Newman Keuls post hoc test revealed that groups 1, 2, and 3 significantly outperformed group 4. Mean scores for the low-achieving students in groups 1, 2, and 3 were higher than the mean score of group 4, but there was no statistical difference established.

DISCUSSION

In this study, we examined the effect of four note-taking procedures on students' ability to retell important story ideas. Although we plan to investigate these procedures over more time and across different thematic units, several results of this investigation can be discussed. First, groups who received the thematic organizer with mediated instruction (including concept mapping) or with direction to independently take notes and complete a concept map, and the group who received mediated instruction (including concept mapping) alone significantly outperformed students receiving the note-taking strategy in which students were asked to follow a story grammar outline while taking notes and to reflect on these notes by answering story grammar questions. Even though this latter group was primed specifically to rehearse story grammar information, their retellings displayed limited use of this information to guide their recall and organization of story ideas. Total story retelling scores and plot and story unity scores were enhanced particularly by the first three note-taking strategies. In all analyses, students participating in the first three groups described above outperformed students participating in the fourth group. Differences between scores were not statistically different for the low-achieving subgroup when performance by ability group was examined.

Second, the thematic organizer combined with either mediated or student-generated note-taking strategies and the mediated strategy alone

TABLE 2
Means and Standard Deviations for Students' Written Retelling of Story Elements on Treatment Passage

		Setting		Theme		Plot		Resolution		Story unity	
Group	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Mediated theme focus	16	4.7	2.0	4.4	4.4	7.2*	3.6	3.9	2.2	4.5*	3.1
Mediated	16	4.1	2.7	6.3	4.3	6.9*	3.6	4.2	2.6	6.3*	3.8
Indiv. notes theme focus	12	4.5	2.6	3.8	4.3	5.8*	3.6	4.2	3.2	5.4*	3.7
Indiv. notes story outline	8	3.4	1.1	2.5	3.7	2.2	2.5	2.5	2.9	1.6	2.3

*$p<.05$, group 1, 2, 3,>4

TABLE 3
Means and Standard Deviations for Achieving and Low-Achieving Students' Written Retelling Units on Treatment Passage

Group	Achieving			Low-achieving		
	N	*M*	*D*	*N*	*M*	*D*
Mediated theme focus	8	30.2*	9.7	8	19.3.	4.3
Mediated	9	33.9*	7.4	7	19.4	12.4
Indiv. notes theme focus	6	30.1*	9.8	6	17.4	15.6
Indiv. notes story outline	5	12.8	11.9	3	11.1	7.5

*$p<.05$, group 1, 2, 3>4

have the potential for enhancing students' use of rehearsal strategies. Each strategy facilitates active cognitive processing (Weinstein & Mayer, 1986) by encouraging students to focus on thematic information and by prompting students to clarify and organize story ideas. For many instructional settings, the teacher as a mediator (i.e., one who encourages students' elaboration, clarification, and organization) can enhance note taking and comprehension, as shown by our students' performance in two of our four groups. However, our findings suggest that the thematic organizer when combined with independent note taking and concept mapping can also be an effective strategy to aid comprehension.

It is important to note that the story grammar procedure did not mediate students' learning. Students in the fourth group were asked to use a story grammar outline to facilitate their note taking and to answer story grammar questions to reflect on their notes. Yet these students did not access this information spontaneously, even though they were allowed to refer to their notes to help them produce their retellings. It could be that the story grammar outline and corresponding questions were viewed as an irrelevant exercise rather than a tool that could aid their conceptualization of the story.

Further, these findings seem to support the hypothesis, advanced by Bransford, Franks, Vye, and Sherwood (1989); Bransford, Sherwood, and Hasselbring (1988); and Bransford, Vye, Kinzer, and Risko (1990) that instruction should provide students with a strategy and a context in which students are actively constructing knowledge by using that strategy. Failure to access relevant strategies is often the result of being uninformed about the usefulness of the strategy. Also, strategic learning must be developed within a meaningful context. A strategy alone will not help comprehension unless students can link that strategy to a knowledge base. What students think about during reading is as important as the selection of a learning

strategy. Providing students with relevant content (e.g., rich thematic units containing a strong semantic network) while developing a strategy to access and rehearse text ideas can help students understand how contextual information can serve as a tool for making sense of text ideas.

APPENDIX
ASSESSING RETELLINGS FOR STORY COHESIVENESS AND UNITY

We analyze students' retellings to determine if they contain a coherent representation of story meaning. This analysis provides us with information about students' ability to form a "story line," in which parts of story (i.e., opening, characters, plot) are clearly related. Therefore, presenting story information in a correct sequential order is a minimum requirement, but scoring represents both sequence and coherence.

To determine unity among story elements, we've interpreted the fifth category of Morrow's (1986) scoring system to be: Story Unity (maximum raw score 4)

Setting—1 pt. is assigned only when: Students present an opening that is relevant to characters who are identified and other setting (place, time) information.

Theme—1 pt. is assigned when: What is stated above leads logically into (1) an initiating event that is consistent with opening information that student has already stated and (2) an identification of goals that are related to the initiating event (i.e., initiating event sets up reasons for goals statements).

Explicit information about characters' motives for goal setting is noted, but not required.

Plot—1 pt. is assigned when: Events (actions and reactions) are provided not only in sequential order but also follow logically the information presented above. Plot information needs to include characters named above and make sense according to students' statement of initiating event and goal(s) statement. Number of events is not counted, but students' retelling must reflect gist of major and supportive events.

Resolution—1 pt. is assigned when: Students explain how goal is attained (i.e., problem is solved, goal is attained) and the story ends with a statement (e.g., summary sentence or two, statement of moral) bringing closure to story ideas.

Total raw score _____

Maximum raw score _____ x 10

Total adjusted score _____

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A Comparison of the Effectiveness of Content Area Reading Strategies at the Elementary, Secondary, and Postsecondary Levels

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For a number of years, content area reading textbooks and professional journals have recommended the use of comprehension and vocabulary strategies to enhance students' learning from texts. Patberg (1979) found a lack of empirical support for many of the reading strategies recommended in those journals and textbooks. Since that time, there has been increasing interest in examining the effectiveness of strategies. Two recent studies found that there was a research base for certain comprehension and vocabulary strategies at the secondary school level (Alvermann & Swafford, 1989) and at the postsecondary school level (Swafford & Alvermann, 1989). It has not been determined, however, that there is a research base for comprehension and vocabulary strategies at the elementary school level.

The purpose of the present study was twofold. First, the research base for content area reading strategies at the elementary school level was investigated. Second, the results of the elementary, secondary, and postsecondary studies were compared to determine the similarities and dissimilarities among the three data sets. Four questions guided the study:

1. What comprehension and vocabulary strategies received the most research attention at the elementary school level?
2. How effective were the strategies that have been studied empirically?
3. In what ways were the elementary, secondary, and postsecondary data sets similar?
4. In what ways were the elementary, secondary, and postsecondary data sets dissimilar?

DATA COLLECTION

Because I wanted to compare the data sets for the elementary, secondary, and postsecondary studies, I examined the same strategies that were identified in the Alvermann and Swafford (1989) study. Six widely used content area reading methods texts were reviewed, and the recommended strategies were listed. Then the list of strategies was narrowed to those that teachers reported using most frequently in the Swafford and Hague (1987) study. The 13 strategies included in the list were the advance organizer, anticipation guide, DRA, DRTA, graphic organizer, list-group-label lesson, mapping, pattern guide, reasoning guide, structured overview, study guide, three-level guide, and the use of text structure.

After the strategies were identified, a computer search was conducted in the *Citation Index to Journals in Education* (*CIJE*) and *Resources in Education* (*RIE*). Studies were identified that had one or more strategy name in the title of the study, the descriptors, and/or the abstract. *Dissertation Abstracts International* was searched by hand. Dissertations were identified if the name of a strategy appeared in the title. Also searched were related literature reviews, the National Reading Conference Yearbooks, and reference lists from the studies that were found. Only those studies that were completed before December 1986 were included in the review so that the elementary school data set could be compared with the secondary and postsecondary data sets.

Each journal article, yearbook article, and *RIE* microfiche document was read. For the dissertations, only the abstracts were read. For each study, the following information was collected: the type of reader (i.e., high, average, low), the kind of text (e.g., science, social studies), the dependent measure/s, and the strategy's effectiveness or ineffectiveness.

RESULTS

The results of the study are reported as answers to the questions that guided the investigation.

Question 1: Which strategies received the most research attention?

The 13 strategies were studied a total of 87 times. Mapping received the most research attention with 24 studies. The effectiveness of text structure instruction was studied 21 times. Advance organizers were examined in 16 of the studies, and DRAs were studied 10 times. The remaining strategies, in descending order, were graphic organizer (n = 6), DRTA (n = 4), anticipation guide (n = 2), study guide (n = 2), and structured overview (n = 2). If all the organizer studies (i.e., advance organizers, mapping, graphic organizers, and structured overviews) were looked at as one large group, they would make up 55% (n = 48) of the research base. No studies were

located for pattern guides, reasoning guides, three-level guides, and list-group-label lessons. (See Table.)

Question 2: How effective were the strategies?

All of the studies that investigated the effectiveness of DRAs found that the strategy was ineffective. In those studies, the effectiveness of DRAs was compared with other strategies such as DRTA, mapping, and graphic organizers. Half of the studies that investigated the effectiveness of DRTAs, anticipation guides, and study guides found that the strategies were effective; the other half of the studies found the strategies were not effective. Conversely, advance organizers, graphic organizers, mapping, structured overviews, and the use of text structure were found to be effective more often than they were ineffective.

Rather than simply labeling strategies as effective or ineffective depending on the total number of effective or ineffective studies, I examined the data for patterns of effectiveness. One pattern that emerged from the data involved the grade levels of students that were used in the studies. Only 17 of the 87 studies used students in grades 1–3. Of those 17 studies, 10 studies also involved students in the upper elementary grades. Seven of the 10 strategies used with both primary and upper elementary students were found to be effective. On the other hand, of the seven studies that used only primary grade students, six studies revealed that the strategies were effective. Those strategies included the advance organizer, anticipation guide, mapping, and the use of text structure.

Another interesting pattern in the data involved text type. Approximately 36% of the studies used only narrative text. This is not surprising considering the nature of material that elementary students generally read. An even greater percentage (41%) of studies used only expository text. The types of expository texts that were utilized included anthropology, astronomy, economics, environmental science, science, and social studies. Science and social studies texts were used most often. Only nine studies (10%) used both narrative and expository texts. Six of the studies used isolated words rather than connected prose. Isolated words were used only in the mapping studies.

Question 3: In what ways were the three data sets similar?

In the elementary, secondary, and postsecondary data sets, more strategies were effective than not effective. In fact, approximately 55% of the studies in each data set found that the strategies were effective.

The most frequently researched strategies for all three data sets were the organizer strategies and the use of text structure. Strategies receiving the least attention were the guides. The research base for guides, particularly at the elementary and postsecondary levels, was sparse.

TABLE
Effectiveness of Content Area Reading Strategies

	Effectiveness	Grade level	Reader ability	Type of text	Dependent measure	Authors
DRA	No	2, 4, 5	LD	SRA skill builders	Descriptive- compare indiv. score	Sinatra, Berg, Dunn
	No	2-6	Low	RD skill builders (expository/narrative)	Multiple choice	Sinatra, Stahl-Gemake, Berg
	No	4	High, av, low	Narrative (basal)	Pupil Response Scale	Davidson
	No	4	Average	Folktale (basal)	Guided recall (I/D), Free recall	Greenwald
	No	4	High, av, low	Not specified	Pupil Response Scale	Petre
	No	4	Average	Narrative (basal)	Gates-MacGinitie Test (comp. subtest)	Weddle
	No	4-6	LD	Narrative (basal)	Not specified	Sachs
	No	5	Average	Narrative & expository	Free recall	Reutzel ('85)
	No	6	Not specified	Social studies	Short ans., completion (D)	Darch, Carnine, Kameenui
	No	6	Not specified	Island of Blue Dolphins, Sounder	SDRT	Kennon, Noland
DRTA	Yes	4	High, av, low	Basal	Pupil Response Scale	Davidson
	Yes	4	High, av, low	Not specified	Pupil Response Scale	Petre
	No	4 & 6	Average	Barnell-Loft Specific Skills Series	Comp. Inventory I & II, Analogy Test A & B: Woodcock Reading Test	Alexander, White, Mangano
	No	5	Not specified	Expository, narrative	Free recall	Reutzel ('86)
GUIDES						
Anticipation guide	Yes	3	Not specified	Narrative (basal)	Free recall (descriptive)	Dean, Vacca, Vacca
	No	5	Not specified	Science & social studies	Free recall, multiple choice (I/D)	Smith
Study guide	Yes	6	High, low	Social studies	Not specified	Shoresman
	No	6	High, av	Social studies	Short answer (I), free recall (D), multiple choice (D)	Taylor, Berkowitz
ORGANIZERS						
Advance organizer	Yes	1 & 5	Not specified	Social studies	Sentence completion task	Lawton
	Yes	3	Average	Expository	Multiple choice (I/D)	Neisworth, Smith, Deno

	Yes	4-6	Low	Social studies	Retelling, short answer lit. & inf. questions (I/D)	Risko, Alvarez ('85)
	Yes	4-6	Low	Social studies	Retelling, not specified comp., discussion	Risko, Alvarez ('81)
	Yes	4-6	LD	Social studies & science	Multiple choice (I/D), transfer test (D)	Darch, Carnine
	Yes	4 & 6	High, av[a], low[a]	Not specified	CAT (interpretive subtest)	Maher
	Yes	5	Low	Social studies	Retelling[a] (I/D), not specified lit. & inf.[a] questions	Risko, Alvarez ('85)
	Yes	5 & 6	High, low	Narrative	Multiple choice	Graves, Palmer
	Yes	6	Not specified	Economics	Multiple choice	Segal
	Yes	6	High[a], low	Not specified	Close, completion	McSparron
	Yes	6	High, low	Not specified	Not specified	Borer
	No	3-5	Not specified	Narrative	Multiple choice (I/D)	Farley
	No	3 & 6	Not specified	Anthropology	Anthropology achievement test	Clawson, Barnes
	No	4 & 6	High[a], av, low	Not specified	CAT (interpretive subtest)	Maher
	No	5	Low	Social studies	Retelling (I/D), not specified lit.[a] & inf. questions	Risko, Alvarez ('85)
	No	6	High, low	Expository & narrative	Not specified	Swaby
	No	6	High	Science	Multiple choice(I/D)	Schulz
	No	6	High, low[a]	Not specified	Close, completion	McSparron
	No	6	Not specified	Science (astronomy)	Multiple choice (D)	Barron
Graphic organizer	Yes	4	High, av	Social studies	Free recall[a], multiple choice	Alvermann, Boothby
	Yes	4	Not specified	Expository	Free recall[a], multiple choice	Matsuyama
	Yes	4	High, av	Social studies	Multiple choice, free recall[a] (I/D)	Boothby, Alvermann
	Yes	5	Av, low	Social studies	Not specified vocab., paragraph meaning, content, social studies	Walker
	Yes	6	High, av, low	Environmental science	Multiple choice (I/D)	Dana
	Yes	6	Not specified	Social studies	Short answer, completion (D)	Darch, Carnine, Kameenui
	No	4	High, av	Social studies	Multiple choice[a], free recall	Alvermann, Boothby
	No	4	Not specified	Expository	Free recall, multiple choice[a]	Matsuyama
	No	4	High, av	Social studies	Multiple choice[a], free recall (I/D)	Boothby, Alvermann
Mapping	Yes	2	High, av	Narrative	Describe story elements	Fountas
	Yes	2, 4, 5	Low	Narrative (basal)	Story retellings, SDRT, ND Skills, oral comp. ques., generalization probes	Idol-Maestras, Croll
	Yes	2, 4, 5	LD	SRA Skill Builders (narrative/expository)	Multiple choice	Sinatra, Berg, Dunn

TABLE
(Continued)

Effectiveness	Grade level	Reader ability	Type of text	Dependent measure	Authors
Yes	2-8	Low	RD Skill Builders (narrative/expository)	Multiple choice	Sinatra, Stahl-Gemake, Berg
Yes	3	High, av	Narrative (basal)	Multiple choice, free recall	Beck, Omanson, McKeown
Yes	3 & 4	Av, LD*	Narrative (basal)	Not specified comp., ND Skills, curriculum assessment inst., listening comp. test	Idol-Maestras
Yes	4	Not specified	Social studies & science	Multiple choice vocab.*, not specified comp. test	Johnson, Fitzelman, Toms-Bronowski, Levin
Yes	4	Average	Folktale (basal)	Guided recall (I/D), free recall	Greenwald, Rennig
Yes	4	Low	Isolated words	Not specified vocab. (D)	Fitzelman, Levin, Johnson
Yes	4-6	LD	Isolated words	Oral definitions, completion task (I/D)	Vogt
Yes	4-6	Not specified	Isolated words	Clustering task (I), multiple choice (D)	Toms-Bronowski
Yes (compared w/context)	4-6 (Americans)	Not specified	Isolated words	Clustering task (I), multiple choice (D)	Johnson, Chu-Chang, Tsui
Yes	5	Not specified	Narrative/expository (basal)	Free recall	Reutzel ('88)
Yes	5	Average	Narrative/expository (basal)	Free recall	Reutzel ('88)
Yes	5	High, av, low	Narrative (basal)	Cloze	Reutzel ('84)
Yes	5	Not specified	Expository	Multiple choice vocab., not specified comp.	Jones
Yes	6	Not specified	Social studies	Free recall (I/D, transfer), short answer	Berkowitz
No	3	Bilingual/ nonbilingual	Science	Content test, teacher-made test	Galvez
No	3 & 4	Av*, LD	Narrative (basal)	Not specified comp., ND Skills*, curriculum assessment inst., listening comp. test*	Idol-Maestras
No	3 & 4	High, low	Narrative (basal)	SDRT (Form B)	Bayne
No	4	Not specified	Isolated words	Multiple choice	Ayala

	No	4	Not specified	Social studies & science	Multiple choice vocab., not specified comp. test*	Johnson, Pittelman, Toms-Bronowski, Levin
	No	4 & 5	Low	Not specified	Not specified comp. & vocab.	Hagen
	No (compared w/ semantic fea. analysis)	4-6 (Americans)	Not specified	Isolated words	Clustering task (I), multiple choice (D)	Johnson, Chu-Chang, Tsui
	No	4-6 (Chinese)	Not specified	Isolated words	Clustering task (I), multiple choice (D)	Johnson, Chu-Chang, Tsui
	No	6	Not specified	Isolated words	Multiple choice (I/D), anomalous sentence test (I/D), cloze, free recall, not specified comp.	Ahlfors
	No	6	Average	Science	Multiple choice, cloze sentence anomaly test	Stahl, Vancil
Structured overview						
	Yes	6	High, av, low	Expository	Multiple choice	Seidman
	Yes	6	Not specified	Social studies	Not specified transfer tests (I/D)	Carr, Dewitz, Patberg
USE OF TEXT STRUCTURE	Yes	3	Not specified	Narrative	Cloze, writing quality, response to literature, concept of story	Calder
	Yes	3	High	Narrative	MAT Reading Survey, not specified comp., recall of story & episode categories	Ottinger
	Yes	4	Low	Narrative	Story production task, recall (D), not specified comp.	Spiegel, Whaley
	Yes	4	Av, low	Narrative	Knowledge of story structure, not specified comp.	Whaley, Spiegel
	Yes	4	Av, low	Narrative	Free & probed recall	Short, Ryan
	Yes	4	Av, low	Narrative	Story structure knowledge, not specified comp.	Fitzgerald, Spiegel
	Yes	5	Not specified	Science	Free recall (I/D)	Bartlett, Turner, Mathews
	Yes	5	High, av, low	Social studies	Essay test, short answer, written summary*	Armbruster, Anderson, Ostertag
	Yes	5	High, av	Narrative	Free recall*, standard. reading, not specified comp. (I/D)	Gordon
	Yes	5 & 6	Not specified	Expository	Not specified (near & far transfer), written summary, free writing*	Raphael, Englert, Kirschner
	Yes	5 & 6	High	Narrative	Not specified	Marks
	Yes	5 & 6	Low	Narrative	Not specified	Marks

TABLE
Continued

Effectiveness	Grade level	Reader ability	Type of text	Dependent measure	Authors
Yes	6	High	Expository & narrative	Multiple choice, written summaries*	Roller, Schriener
Yes	6	High, av, low	Social studies	Free recall, summarization task, written production task	Raphael, Kirschner
Yes	6	Not specified	Social studies & science	Free recall & sentence recog. (I/D)	Duffy
Yes	6	Not specified	Social studies & science	Free recall & sentence recog. (I/D)	Duffy
Yes	6	High, av, low	Folktales	Free recall & cued recall* (I/D)	Bowman
No	5	High, av, low	Narrative	Free recall	Dreher, Singer
No	5	High, av, low	Social studies	Essay test*, short answer*, written summary	Armbruster, Anderson, Ostertag
No	5	Low	Folktales	Multiple choice	Sebesta, Calder, Cleland
No	5	High, av	Narrative	Free recall, standardized reading, not specified comp. (I/D)*	Gordon
No	5 & 6	High	Expository & narrative	Multiple choice*, written summaries	Roller, Schreiner
No	5 & 6	Not specified	Expository	Not specified(near & far transfer*), written summary, free writing	Raphael, Englert, Kirschner
No	6	Low	Narrative	Free recall	Tuckett, Patberg, Dewitt
No	6	High, av, low	Folktales	Free recall* & cued recall (I/D)	Bowman
No	Elem.	LD	Narrative	Not specified comp. test, standardized reading test	Griffey

* Signifies effectiveness (if "Yes" in first column) or ineffectiveness (if "No" in first column) for a particular reader, text type, or dependent measure.
Av: Average
I: Immediate
D: Delayed
Note: Studies in the Table add up to more than 57 for two reasons. (1) When multiple strategies were tested in one study, the study was listed under each strategy name. (2) When a strategy was effective for only one type of reader, text type, and/or dependent measure but not the other (e.g., an advance organizer was effective for average and low readers and ineffective for high readers), a study was included in both the "Yes" and "No" categories.

The DRA was found to be ineffective in almost all of the studies reviewed at the elementary and secondary school levels. All of the studies conducted with elementary school students found that the DRA was ineffective compared to other strategies. At the secondary school level, the DRA was effective in only one of the two studies that investigated its effectiveness. The DRA was not studied at the postsecondary school level.

A similarity between the elementary and postsecondary data sets had to do with the type of dependent measures used in the studies of text structure and advance organizers. In both data sets, free recall was the predominant measure for the text structure studies. Multiple choice tests and completion measures were the predominant measures for the advance organizer studies. (No comparison was made with the secondary school data set because the types of dependent measures were not identified in that study.)

A similarity between the elementary and secondary school data sets was that more studies investigating the effectiveness of graphic representations of text (i.e., graphic organizers, mapping, structured overviews) found the strategies to be effective than ineffective. Conversely, for both data sets, studies that investigated the effectiveness of the more traditional prose organizer (i.e., advance organizers) were found to be ineffective more often than effective.

The last similarity for the three data sets was that none of the studies revealed a clear pattern of one strategy being more effective than another for students of various reading ability levels. One reason for this lack of consensus could be that researchers defined high, average, and low readers in different ways and that the reading levels of subjects were not always specified.

Question 4: In what ways were the elementary, secondary, and postsecondary data sets dissimilar?

There was a difference in the number of studies that investigated the effectiveness of directed reading activities and directed reading-thinking activities. The elementary data set included far more DRA and DRTA studies than the other two data sets. Different types of texts were used at the different grade levels for the DRA and DRTA studies. Narrative texts were used primarily in the elementary data sets. For the secondary and postsecondary school data sets, expository texts were used.

Another difference between the three data sets was that more mapping studies were conducted at the elementary school level (n = 24) than at the secondary (n = 6) and postsecondary (n = 4) school levels. On the other hand, more studies involving advance organizers were conducted at the secondary school level (n = 45) and postsecondary school level (n = 41) than at the elementary school level (n = 16).

A difference in the type of texts used in the mapping studies was also observed. In the secondary and postsecondary studies that found mapping to be effective, expository texts were used. In the effective mapping studies

at the elementary school level, narrative texts and isolated words were the primary text types used.

The types of dependent measures used in the elementary and postsecondary school data sets were also dissimilar. For the graphic organizer studies in the postsecondary data set, standardized reading tests were used for the dependent measures. For the elementary data set, free recall and multiple choice tests were utilized. (As mentioned above, no comparison was made with the secondary school data set because the types of dependent measures were not identified in that study.)

DISCUSSION

A research base was found for many of the 15 comprehension and vocabulary strategies investigated in the present study and the two previous studies (Alvermann & Swafford, 1989; Swafford & Alvermann, 1989). What conclusions can be drawn about the effectiveness of the strategies for different grade levels, different readers, different types of text, and different dependent measures? Unfortunately, but not surprisingly, the comparison of the three research overviews does not reveal conclusive results about the effectiveness of the strategies. Most strategies were effective in some studies and ineffective in others. These mixed findings were similar to the results of research reviews that investigated the effectiveness of graphic organizers (Moore & Readence, 1984–85) and advance organizers (Luiten, Ames, & Ackerson, 1980).

Only one strategy, the DRA, was found to be consistently ineffective at the elementary and secondary school levels. Although the DRA has been widely recommended by authors of methods texts and basal reading series, results of this review suggest that the strategy does not have as adequate a research base as might be expected. Perhaps the use of the DRA is supported more by tradition than by research.

The conflicting results of strategies research could be explained in several ways. First, researchers who investigated the effectiveness of different strategies may have defined the strategies in different ways. The problem that results from the lack of a precise operational definition for a strategy has been noted by other researchers, particularly in studies of advance organizers. Second, the length of instruction in the use of particular strategies varied. In fact, several authors suggested that the lack of significant differences in favor of the strategies may have resulted from limited training and isolated use of the strategies. Finally, the design of the studies and the analysis procedures may have influenced the different outcomes of the studies.

CONCLUSION

The comparison of the effectiveness of content reading strategies at the elementary, secondary, and postsecondary levels seems inconclusive.

Because the results of the studies seem contradictory at times, conclusions about a strategy's effectiveness or ineffectiveness should be drawn cautiously. Perhaps the key to determining the effectiveness of a strategy is to examine the circumstances under which a strategy was beneficial rather than to determine if a strategy was effective for all students, in all situations, and with all types of texts.

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Involvement of University Faculty Members in Basal Reader Adoption Procedures

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Despite recent innovations in approaches to reading instruction, the basal reader is the most widely used tool for teaching reading in the elementary schools. The basal reader is used in about 90% of the classrooms in this country (Farr, Tulley, & Powell, 1987; Miller, 1986), and the procedures, skills, and materials incorporated in the basal reader program determine to a large extent how children learn to read. Although basal series appear to be quite similar, they differ significantly in quality of literary content, types of comprehension questions, and presentation of vocabulary (Muther, 1987), among other factors. Therefore, the selection of appropriate basal reader series continues to be an important issue in education.

Decisions about basal reader adoptions are made either by centralized state-level textbook adoption systems (22 states) or by open systems in which local districts choose their own textbooks (28 states) (Farr et al., 1987). In either case, university faculty are rarely involved in adoption procedures. However, during the most recent basal reader adoption in Tennessee, two reading professors were asked to participate in the selection of the series. They were consulted about criteria for evaluating basal readers, research related to the use of basal readers, and the writing of reports that summarized various characteristics, strengths, and weaknesses for each of the basal series.

University faculty involvement in the Tennessee basal reader adoption process was worthwhile for several reasons. The faculty members learned about the adoption procedures and became familiar with the series under

consideration. The teachers serving on the adoption committee became knowledgeable about recent research on basal readers. Perhaps the greatest benefit lay in the relationships developed between university faculty and public school teachers as they worked together in considering the features of various basals and in writing reports that evaluated these series for statewide adoption.

INITIAL PHASES OF THE PROCESS

University faculty were first involved in the process by meeting with members of the task force, which included the director of Textbook Services and representatives from the State Textbook Commission and the State Department of Education. The initial task was to develop an evaluation plan consisting of criteria for rating basal readers. Instead of using numerical ratings that could rank series by scores, task force members used + for excellent, 0 for adequate, and — for inadequate. Any mark other than 0 was accompanied by a written explanation. Reviewers were also to consider each series' correspondence with the Tennessee Instructional Model (TIM), which is based on the Madeline Hunter model of instruction. As a result of this session, an 11-page evaluation form was developed.

A three-day training session was held in June when the task force met with teachers who had been selected as evaluators. These teachers were Career Level II and III teachers, or those teachers who could receive increased pay for additional work as a result of their experience and meritorious teaching. During the summer, they each evaluated all of the basal readers for a particular grade level.

A major component of the training session was the presentation of research and theory related to basal readers. Many textbook reviews are conducted without knowledge of research (Dole, Rogers, & Osborn, 1987), so evaluators often base their decisions on the publisher's reputation, the format and content of the readers, and personal biases. The Tennessee teachers seemed very interested in the research and theoretical basis for their decision making, however. Because time was limited, only a summary of relevant studies and theory could be presented. The essential content of some of this material follows.

THE THEORY AND RESEARCH BASE PRESENTED

The findings of Templeton (1986) were shared to help teachers evaluate the appropriateness of readiness materials. Templeton discovered that readiness materials often focus on sounds first and print second, even though speech is too transitory to be studied readily. Therefore, it seems that teachers should consider looking for materials that reverse this order of presentation. Templeton also found that writing activities have not been effectively utilized in readiness materials. Much recent research and theory support the extensive use of writing in early language instruction.

To help in decisions about the individual lessons in the basal readers, the university faculty pointed out that each reading lesson should advance skill in both word identification and comprehension. There is a reciprocal relationship between the two skills. In addition, reading lessons should focus on both understanding and appreciating stories.

Periodic teacher questioning is important for helping children understand critical points (Anderson, Hiebert, Scott, & Wilkinson, 1985). Discussion questions "that lead children to integrate information about the central points of a selection with their prior knowledge significantly enhance reading comprehension" (Anderson et al., 1985, p. 55). This point is also made by Beck, Omanson, and McKeown (1982), Hansen (1981), and Hansen and Pearson, (1983). A problem is that many questions in manuals are poor—"too general, leading the children's thinking afield; or trivial, focusing their thinking on unimportant details" (Anderson et al., 1985, p. 56). Questions should promote higher-level thinking skills, probe the plot, search for deep meanings, and lead to inferences. Isolated detail questions should be avoided (Anderson et al., 1985; Beck & McKeown, 1981).

Teachers should also realize that questioning does not replace direct instruction. Manuals should encourage teachers to explain, model, demonstrate, and illustrate reading skills and strategies that students should learn to use (Anderson et al., 1985; Duffy, 1981; Rosenshine & Stevens, 1984).

Building background knowledge is important in developing reading comprehension, but teachers should avoid covering too wide a variety of topics. Discussion of prior knowledge should relate directly to the major concepts of the upcoming story (Anderson et al., 1985; Hansen, 1981; Hansen & Pearson, 1983; Omanson, Beck, Voss, & McKeown, 1984; Beck, McCaslin, & McKeown, 1981; Beck et al., 1982).

Durkin (1981) found that teacher's manuals of basal reader series give much more attention to comprehension assessment and practice than to direct, explicit instruction. Teaching suggestions are often very brief. Ideas for comprehension instruction are often offered after rather than before the selection. This material should be presented before the selection so that the skill can be used in understanding the selection more fully as it is read.

Sorenson (1985) reported that basal reader teacher's manuals often provide the same instructions for teaching all vocabulary words, regardless of the particular words involved or the grade level of the reader. Manual instructions often focus more on the pronunciations of new words than on meanings. They frequently give no strategies for reteaching words that have been previously presented, appearing to assume that, if a word has been presented, it has been learned.

Research (Chall, 1983; Johnson & Baumann, 1984; Pflaum, Walberg, Karegianes, & Rasher, 1980; Williams, 1985) indicates that phonics instruction is an essential ingredient for children to learn to read words.

"...[C]hildren who are taught phonics get off to a better start in learning to read than children who are not taught phonics" (Anderson et al., 1985, p. 37). Research indicates that phonics should be related to words, not simply taught through rules. Words should serve as concrete examples. Children should use known words to help them figure out unknown words (Anderson et al., 1985; Cunningham, 1975–1976). There is also evidence that many reading programs teach more letter-sound relationships than children need to learn through direct instruction. Phonics instruction continues over too long a period; it should be completed by the end of second grade. Only enough phonics to enable a child to approximate pronunciation is necessary (Anderson et al., 1985). There are indications that "...a high proportion of the words in the earliest selections children read should conform to the phonics they have already been taught" (Anderson et al., 1985, p. 47). This is necessary so that the children can practice, extend, and refine their use of phonics. However, authors need some flexibility in word choice so that stories will not be uninteresting.

Early reading material should tell interesting, complete stories. Bridge, Winograd, and Haley (1983) have pointed out that the plotless strings of disconnected sentences found in preprimer and primer selections may adversely affect comprehension. Although selections may have been written this way to produce lower readability levels, connectives may be left out of stories, resulting in increased reading difficulty. Transformations of traditional folktales to reduce readability level, for example, have caused them to lose much of their original impact (Egan, 1983; Holbrook, 1985). Words and sentence structure have been changed to the extent that the stories are no longer very similar to the originals.

Evidence indicates that children can understand stories written in familiar language better than those written in stilted, unnatural language (Anderson et al., 1985; Ruddell, 1965; Tatham, 1970; Wilkinson & Brown, 1983). Thus, teachers may wish to read some of the material aloud to see how naturally the language flows.

In looking at the types of selections included in basal readers, Flood, Lapp, and Flood (1984) found that narrative selections dominate in basal readers. They found only a small percentage of expository selections. Students may not get experience reading the types of material that are presented in their content area textbooks under these conditions.

Pieronek (1980) found that basal reader selections reflect students' interests reasonably well. Only mystery and humor were somewhat slighted. Teachers may need to make suggestions for appropriate reading in these areas to adjust for this situation.

Britton, Lumpkin, and Britton (1984) and Hopkins (1982) studied the representation of various groups within our population in basal stories. There is concern about inadequate representation of women and minorities and about representation of elderly and handicapped people.

Snyder (1979) and Green-Wilder and Kingston (1986) studied the reading behavior of characters in basal reader selections. Having characters in stories model reading behavior for students would be desirable. The findings were disappointing; not much reading behavior was displayed.

Another concern is the appropriate use of oral reading in the classroom. Basal readers should reflect acceptable procedures. Silent reading should always precede oral reading to increase oral fluency. Beginning readers should have frequent opportunities to read aloud. Oral reading should continue, but more time should be spent reading silently as the reader becomes skilled (Anderson et al., 1985), since older students, like adults, have more need for silent reading in their daily lives than they do for oral reading.

Concern exists about the amount of emphasis on workbooks and skill sheets within a basal program. There is little evidence that workbook and skill sheet activities are related to reading achievement. Use should be kept to a minimum, only to provide worthwhile practice (Anderson et al., 1985; Leinhardt, Zigmond, & Cooley, 1981; Rosenshine & Stevens, 1984). Since writing promotes reading achievement, worksheets and workbook pages should offer more opportunities for extended writing (more than one or two sentences) if they are to be of maximum benefit. Teachers should also realize that workbooks do not always offer material that fits the students for which it is intended. Fitzgerald (1979) and Stenson (1982) found that, in general, workbooks were too difficult in readability for the grade levels for which they were intended.

FINAL PHASES OF THE PROCESS

Later in the training session, the university faculty met with the teachers to decide upon a consistent way to evaluate the basal series. It was agreed that for each series at each grade level, a descriptive and an evaluative paragraph would be written. The descriptive paragraph would consist of a listing of core components (i.e., manuals, readers, workbooks, skills charts), general content, lesson design, and skill strands, whereas the evaluative paragraph would include the strengths and special features of each series. The faculty members worked closely with the teachers on practice paragraphs to reach some degree of consistency in writing style and content.

After teachers had completed their independent evaluations over the summer, they met with the task force at a debriefing session in August. Representatives from publishers that had bid on the Tennessee adoption were present to display their materials and answer questions. During the remainder of this session, teacher evaluators wrote consensus reports for each publisher across all grade levels. These reports were based on the evaluation forms they had completed over the summer. Before accepting the reports, the task force and entire group of teacher evaluators reviewed them for consistency, clarity, and usefulness. The descriptive reports were

later sent to local adoption committees. During the debriefing session, the primary role of the university faculty members was to assist with report writing and to answer questions about basal reader research.

The next step in the adoption process was the hearings, in which publishers presented their series to the State Textbook Commission. Again, faculty were there for support and to answer questions that might arise. The Textbook Commission then presented its list of acceptable series to the State Board of Education, which endorsed the selection and submitted the list to local school districts.

When the local school systems received their lists, some requested training to help them select the series that were most appropriate for their particular situations. Again, both State Department personnel and university faculty were available to present pertinent information. The adoptions were not finalized until spring, although the selection process had been in operation for over a year by that time.

It was the belief of all those involved that using university personnel as a resource for basal reader adoption provided a solid basis for the selection process. The model used in Tennessee could be followed by any centralized state adoption system, and university faculty could add credibility to the process.

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CHALLENGES IN ASSESSMENT AND CORRECTION

Informal Reading Inventories: A Holistic Consideration of the Instructional Level

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Teachers have used informal reading inventories (IRIs) for nearly half a century to help place students in instructional materials. Hoover (1985) found that 75% of the teachers in her study ranked instructional-level placement either first or second in importance.

Betts (1946) is generally credited with the term *instructional level.* He argued that many factors must be taken into consideration in determining a student's instructional level; however, he discussed comprehension, word recognition, and behavioral characteristics as the critical determinants. Comprehension was set at 75%, and word recognition was set at 95%. Behavioral characteristics included such factors as the ability to anticipate meaning; acceptable reading posture; and freedom from tension, finger pointing, and head movement.

In a more recent description of the instructional level (Johnson, Kress, & Pikulski, 1987, pp. 16–19), the same percentages were reiterated with the caution that the criteria should be tempered by the nature and quality of the student's overall reading performance. Both quantitative (percentages) and qualitative (behavior characteristics) criteria need to be considered when determining a student's instructional level. In addition, Johnson et al. (1987) urged teachers to consider the concept of an instructional range that may, in some instances, span two or more grade levels.

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Previous research on criteria for the instructional level has had several limitations. First, studies (e.g., Powell, 1970) have held comprehension constant while examining the number of miscues the student could tolerate. Second, the design of studies has generally excluded instructional range from analysis, though a range of instructional levels is often the result of administering an IRI (e.g., Homan & Klesius, 1985). Third, the behavioral characteristics or qualitative criteria have not been specifically considered when investigating the instructional level (e.g., Anderson & Joels, 1986).

In short, research on criteria for the instructional level has been narrow in scope so a specific element, such as word recognition, could be studied. This study was intended to provide a more holistic view of the concept of instructional level as it is determined in settings commonly used by teachers and diagnosticians.

This holistic view considered the following four factors: word recognition in isolation, word recognition in context, comprehension, and behavioral characteristics. Examiners took each of these factors into consideration when determining students' instructional levels. The growing interest in miscue analysis prompted consideration of counting only significant miscues (miscues resulting in altered meaning) on word recognition percentages.

METHOD

In the study, 51 different examiners administered a total of 88 IRIs to students in grades 1 through 6. The examiners consisted of students in undergraduate and graduate reading courses as well as classroom teachers and reading specialists. The examiners were trained in using a holistic view to determine reading levels. Some of the IRIs were given in clinical situations while others were given in school settings. The 88 students came from schools ranging from lower-middle to upper-middle class.

Four different commercially published IRIs were used: *Analytical Reading Inventory* (Woods & Moe, 1985), *Basic Reading Inventory* (Johns, 1985, 1988), *Classroom Reading Inventory* (Silvaroli, 1986), and the *New Sucher-Allred Reading Placement Inventory* (Sucher & Allred, 1981).

To analyze the results, the investigator examined the summary sheet on each IRI test booklet. Five of the students did not have an instructional level so they were excluded from the study. Of the remaining 83 IRIs, 43 were from students in grades 1 through 3, and 40 were from students in grades 4 through 6. Each student's word recognition and comprehension scores at the instructional level were determined by reviewing the summary sheets on the IRIs as well as the individual passages. When there were minor discrepancies, the investigator referred to the student's oral reading as recorded by the examiner for word recognition and comprehension scores.

Once each student's scores at the instructional level were determined, they were averaged for the total group and then separately for the primary students and intermediate students. Separate percentages are also reported

for students' instructional levels (some had two or more) and their *highest* instructional level. The data are presented in the following table.

TABLE
Average Word-Recognition and Comprehension Scores (in Percentages) at the Instructional Level for 83 Elementary Students

Grade	Word recognition (All miscues)*	Word recognition (Significant miscues)†	Comprehension
Primary (N = 43)			
Instructional level(s)	91.57	96.62	78.5
Highest instructional level	91.02	96.42	79.2
Intermediate (N = 40)			
Instructional level(s)	94.23	97.95	74.6
Highest instructional level	94.13	97.75	76.9
Total group (N = 83)			
Instructional level	93.22	97.26	76.9
Highest instructional level	92.52	97.06	78.2

* Insertions, repetitions, omissions, reversals, prompts, and substitutions.
† The meaning of the sentence or passage was significantly altered.

RESULTS

The first column of the table contains word-recognition percentages when the following miscues were counted: insertions, repetitions, omissions, reversals, examiner prompts, and substitutions. Average word-recognition percentages ranged from 91% to 94%. The lowest percentage (91.02) reflected the highest instructional levels for students in the primary grades.

The second column contains word-recognition percentages when only significant miscues were counted. Criteria from the *Basic Reading Inventory* (1988) were used to determine significant miscues. In essence, miscues were considered significant when the meaning of the sentence or passage was significantly altered and the student did not correct the miscue; a nonword or partial word was substituted for a real word; and/or a word was pronounced by the examiner. Self-corrections, dialect miscues, and substitutions that were later read correctly were excluded as significant

miscues. Average word-recognition percentages, as expected, rose for both primary and intermediate students. Both groups of students achieved at least 96% in word recognition.

Comprehension scores (column 3) ranged from 74.6% for intermediate students to 79.2% for primary students. Primary students, on the average, received slightly higher average comprehension scores than the intermediate students. There were very small differences when the students' instructional levels (some students had a range of instructional levels) were compared to their *highest* instructional levels. Without exception, word-recognition percentages were slightly lower for the highest instructional level, while comprehension was slightly higher. This finding was consistent for both primary and intermediate students.

DISCUSSION

The primary purpose of this study was to investigate word-recognition and comprehension criteria at the instructional level by using the total results of an IRI (word recognition in isolation; word recognition in context; comprehension; and qualitative criteria such as hesitations, finger pointing, and tension). Over 50 different examiners took part in the study. Using a large number of different examiners and several types of IRIs increased the generalizability of the results; however, these variables also meant that administration and scoring procedures may have varied. The results, nevertheless, add some new and interesting findings when previous research on the instructional level is considered.

For years, the commonly accepted criteria for the instructional level has been a comprehension score of 75% and a word-recognition score of at least 95%. Most studies (e.g., Homan & Klesius, 1985; Powell, 1970) have held comprehension constant to investigate word-recognition criteria. The holistic approach in the present study considered both variables (comprehension and word recognition) as well as word recognition in isolation and qualitative criteria (e.g., tension, nervousness). Average comprehension scores at the instructional level (when rounded) met or exceeded the 75% proposed by Betts (1946) for students in both the primary and intermediate grades. It seems reasonable to expect students to achieve average comprehension scores of at least 75% at their instructional levels.

When average word-recognition scores for the instructional level are considered, a lack of consensus seems to be the best generalization. According to Harris and Sipay (1985) a number of studies seem to support 95% word recognition for the instructional level (Davis & Ekwall, 1976; Leslie & Osol, 1978; Hoffman et al., 1984). The Homan and Klesius (1985) study supports 94 to 95%. Anderson and Joels (1986), however, found criteria that closely matched the percentages reported in the present study. When Anderson and Joels (1986) counted repetitions (as in the present study), primary students (grades 2 and 3) achieved word-recognition scores

of approximately 92%; intermediate students (grades 4 and 5) achieved nearly 94% in word recognition.

A study by Powell (1970) found that 91 students in grades 1 through 3 averaged approximately 88% in word recognition while achieving 70% comprehension. In grades 4 through 6, the average word-recognition score was 92% with 70% comprehension for 87 students.

Based on the data reported in the present study and six previous studies, 92% to 95% word recognition seems to be a reasonable expectation for students in the intermediate grades. The available research does not consistently support a specific percentage.

The present study, along with studies by Powell (1970) and Anderson and Joels (1986) raises questions about using 95% for word recognition for students in the primary grades. It is the opinion of this investigator, based on the data from these studies, that further examination of this percentage be undertaken for students in the primary grades. The traditional Betts criteria appear to be too stringent.

The present study has also provided percentages for word recognition when only significant miscues are considered. With the growing interest in miscue analysis based on the work of Goodman, Watson, and Burke (1987) and others (Cunningham, 1984; Woodley, 1987), this study has shown that counting only significant miscues results in higher word-recognition percentages. The 83 students in the study achieved average word-recognition scores that, in rounded figures, were usually 97%. Pikulski and Shanahan (1982) have noted that counting only significant miscues would likely yield substantially higher word-recognition scores. This study offers some empirical evidence to support their observation. Teachers who choose to count only significant miscues may need to raise the word-recognition criteria expected for the instructional level for all students. Comprehension scores are consistent with the traditionally accepted 75% Betts criteria.

The present study used a more holistic approach than previous research to determine students' instructional levels. While strong evidence was found for an average comprehension score of 75%, word-recognition scores should be further studied—especially for students in the primary grades. Some consideration of differential criteria for students in the primary and intermediate grades appears to be warranted based on this study and the research of Powell (1970) and Anderson and Joels (1986). For students in the primary grades, 95% appears to be too stringent.

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Improving Disabled Readers' Summarization and Recognition of Expository Text Structure

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This study was prompted by a concern for identification of those factors that lead to improvement in disabled readers' ability to comprehend expository text. In particular, it addressed the question of how the use of a hierarchical, generative learning strategy, such as graphic organizers, affects poorer readers' metacognitive ability to identify and summarize important ideas found in expository text.

Much recent research in reading comprehension has indicated that readers' ability to recognize important text ideas is a factor in general comprehension and recall (Brown & Day, 1983; Brown, Day, & Jones, 1983; Freebody & Anderson, 1986; McNeil & Donant, 1982; Taylor, 1980; Winograd, 1984; Wittrock, 1982). Meyer, Brandt, and Bluth (1980), for example, suggested that readers use the top-level structure of text to search for relations that link information into some cohesive whole. Readers who are unaware of structure employ an unorganized or serially organized encoding of information that results in an almost random retrieval of ideas and thereby inhibits comprehension.

Poor readers are less able than good readers to identify important ideas in a reading passage (Dunn, Mathews, & Bieger, 1979; Eamon, 1978; Garner, 1985). They do not use text structure effectively to aid their recall (McGee, 1982; Meyer et al., 1980; Smiley, Oakley, Worthen, Campione, & Brown, 1977; Taylor, 1980).

Much research on readers' identification of importance has been carried out by researchers interested in summarization strategies (Rinehart, Stahl, &

Erickson, 1986). Brown (Brown & Day, 1983) conducted several studies of students' summarization ability. She developed a hierarchical set of summarizing rules based on Kintsch and van Dijk's (1978) comprehension macrorules. She found that the ability to use text information so that it can be abstracted, reduced, and reorganized into a summary required higher levels of thinking and reading ability than is generally assumed. Briefly, her summarizing rules were:

1. Delete material that is unimportant.
2. Delete material that is repetitive.
3. Substitute superordinate term for a subordinate term.
4. Select the topic sentence.
5. Invent a topic sentence if the paragraph has none.

Winograd (1984) worked with good and poor readers in the eighth grade and found that poor readers had difficulty using summarization rules effectively, in part because they had difficulty identifying important ideas in passages. Poorer readers selected sentences that were personally interesting but not important, while better readers identified important sentences based on the information they contained. Even when poorer readers did correctly identify important ideas, there was a tendency for them to omit these important ideas in their summaries.

Niles (1965) and Moore and Smith (1987) have called for systematic, sequenced instruction of expository text organizational patterns for poorer readers. We have worked with disabled readers in three previous instructional studies, attempting to help them develop strategies for improving their comprehension of expository text, in particular their ability to identify importance levels of ideas within passages. In the first two studies (Weisberg & Balajthy, in press), 24 disabled readers were trained in a modified version of Brown and Day's (1983) summarization macrorules. The students were taught to identify and underline with different colored pencils sentences representing the following three levels of text structure: less important details (blue), important facts (red), and main ideas (black).

Findings indicated that students could be taught to improve their ability to recognize levels of importance within highly structured expository passages. However, extra training was necessary to achieve significant improvement in differentiating important fact statements from less important detail statements.

A third study (Weisberg & Balajthy, in press) focused on helping these same disabled readers write better summaries based on their identification of main ideas and important facts in passages. Results indicated that posttraining summaries contained significantly more main ideas and important facts than did the students' pretraining summaries.

When the posttest summaries were analyzed more closely, however, it was obvious that students had used a delete and copy strategy (Sherrard, 1986). That is, they simply deleted details and copied the sentences containing the

main idea and important facts word for word for their summaries. Both the researchers and the students' teachers recognized the need for students to generate summaries in their own words, making summary writing a more involved cognitive task.

In a preliminary attempt, the passages were removed from students' view once the underlining procedure had been carried out, in order to encourage written summaries in the students' own words. The reading disabled students were unable to function under such conditions. An intermediate step in the summarization process was needed.

Other studies have found that the use of graphic organizers can enhance readers' comprehension and recall. Versions of these diagrammatic expository organizational devices have been called *graphic organizers* (Boothby & Alvermann, 1984), maps and semantic maps (Armbruster & Anderson, 1980: Berkowitz, 1986; Sinatra, Stahl-Gemake, & Berg, 1984), pyramids (Clewell & Haldemos, 1983; Solon, 1980), networks (Holley & Dansereau, 1984), and semantic organizers (Pehrsson & Robinson, 1985).

The present study was undertaken to answer several questions. First, can the use of hierarchically organized graphic organizers (see Figure 1) as a learning strategy improve disabled readers' ability to assign levels of importance to explicitly stated ideas in expository text? Second, does the ability to select more important ideas in expository passages improve readers' written summaries, both in terms of content and quality? Finally, it was hoped that an examination of results would give some indication as to how that improvement might occur.

METHOD

Subjects

Training was carried out with 25 students. The two classes of junior high school–aged students attended a full-time, ungraded clinical school for the reading/learning disabled. Each student had been previously classified as reading disabled on the basis of reading achievement test scores at least two grade levels below expectancy. Four students were dropped from the study due to poor attendance during training sessions.

The subjects' mean age was 13 years, 7 months. Their mean IQ on the WISC-R was 99, and their mean score on the reading subtest of the Stanford Achievement Test was equivalent to the 5.6 grade level.

Pretesting

Materials. The four evaluation passages (see Appendix for example) were obtained and adapted in the same fashion as training passages (see below). Mean readability was sixth grade (Fry, 1977). The passages ranged in length from 78 to 118 words, with a mean of 92 words. Topics included rainfall, natural resources, historical sites, and state symbols.

Pretest. A pretest-posttest design was used due to school administrative restrictions, the small size of the school, and the unique characteristics of the clinical population at the school. Pretesting prior to the training sessions required subjects to (1) read two passages; (2) differentiate levels of importance in passages by underlining less important details in blue, important facts in red, and main ideas in black; and (3) write summaries of the passages with passages removed.

Training Procedures

Materials. For instruction, nine expository text passages were used, each of which was adapted from fourth-grade social studies textbooks. Mean readability was sixth grade (Fry, 1977). Mean length was 98 words. As necessary, passages were rewritten to have one stated main idea somewhere within the passage, at least two important facts supporting the main idea, and several less important details, each of which related to one of the important facts. While not representative of most classroom reading materials, which are usually less well organized, the highly organized exposition was deemed desirable, given the purpose of the study. An additional benefit from the tight organization was that students were better able to understand explanations of text structure.

Training. Training was carried out by the researchers. Beginning immediately after administration of the pretest, subjects received five 1-hour training sessions over a two-week period in the use of graphic organizers. In a typical training exercise, subjects first read a passage and identified its main idea and important idea sentences by applying the macrorule underlining procedures explained above. They underlined unimportant ideas in blue, important facts in red, and the major idea in black. Students then constructed a hierarchical graphic organizer (see Figure 1) to reflect the passage's top-level ideas. They incorporated the ideas they had just underlined into their graphic organizers. The graphic organizers consisted of boxes, within which ideas from the passage were recorded in telegraphic writing — short words or phrases that condensed the sentence information. The final step was to write a summary based on their graphic organizers.

Subjects were taught the procedure on the first day, and they practiced and received feedback on the procedure for the remainder of the training sessions. Instruction included explicit rules and modeling for constructing graphic organizers and writing summaries.

Constructing graphic organizers with telegraphic writing was taught in several steps. First, students drew rectangles to reflect the paragraph structure; these formed the outline for the students' graphic organizers. Next, subjects re-read the sentences they had identified as the passage's main idea and important facts. The critical elements in the sentences were reduced to a few key words "as if they were going to be put into a telegram."

Finally, students wrote the contents of each rectangle by condensing the passage's main idea into a phrase or clause and writing it in the top rectangle of their maps. They continued by writing the passage's important facts in the lower rectangles (see Figure 1).

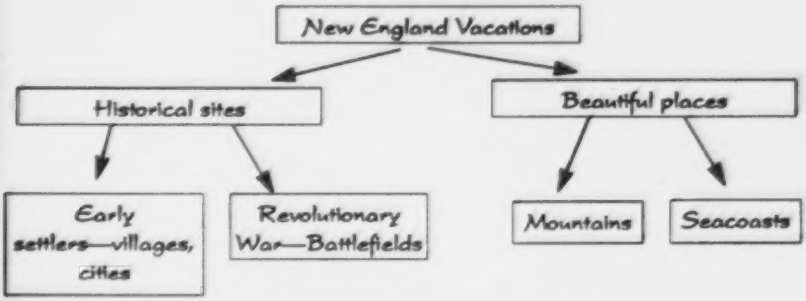

Figure 1. Sample student graphic organizer.

Students drew arrows from the map's top rectangle containing main idea information down to the two or more rectangles on the next lower level containing important fact information that supported the main idea. This was done to emphasize the levels of importance.

At this point, passages were removed. Subjects then wrote summaries in complete sentences using only the telegraphic words and phrases in their graphic organizers as their guides. The original passages were then returned to students who received feedback from the researchers about (1) the levels of importance in passages, (2) information that should have been included in graphic organizers and summaries, and (3) reasons for these decisions.

Posttest

Posttests required subjects to read two new passages. Procedures were identical to the pretesting except that all subjects constructed graphic organizers as an intermediate step between underlining and writing summaries. In order to ensure equivalence of pre- and posttest administrations, the four testing passages were given to students in counterbalanced order both within and between administrations.

Scoring

A master template of the idea structure in each passage was obtained by parsing the text into idea units and constructing a grid based on the levels of importance of the ideas. The researchers created the grid and consulted with the classroom teachers for accuracy. Any discrepancies in rating were resolved

in conference. A three-level scale of importance was used, from main idea to important fact to less important detail (adapted from Johnson, 1970).

The underlining and summaries were separately scored against this template of idea units. For each task, two scores were obtained for each subject, at the main idea level and at the important fact level. Each score was the percentage of items that the subject had included on the template list at that level.

RESULTS

Four percentage scores were obtained for each subject for both pretest and posttest. Mean scores, broken down by level of structural importance within the passages, are reported in the table below. These were analyzed using repeated measures MANOVA with three within-subject factors of two levels each: Training (pretest and posttest), Task (underlining and summarizing), and Level of importance (main idea and important fact).

The main effect for Training was statistically significant, multivariate F (1, 20) = 11.00, p <.01. Neither the effect for Task nor the effect for Level of importance was significant. The analysis did find one interaction, a Training by Task by Level of importance interaction, multivariate F (1, 20) = 7.02, p < .05.

Individual univariate ANOVAs indicted that posttest scores were significantly higher than pretest scores on two of the four tasks and levels. Effect sizes were calculated based on procedures described in Cohen (1977). Posttest scores for underlining at the main idea level were significantly higher than pretest scores, F (1, 20) = 10.80, p < .01, and the effect size was in the high range, 0.85. Posttest scores for underlining at the important fact level and for summarizing at the main idea level were not significantly higher. Posttest scores for summarizing at the important fact level were significantly higher, F (1,20) = 7.48, p <.05, and the effect size was in the moderate range.

Results pertinent to the Training by Task by Level interaction were examined. Subjects' performance on two of the four measures (underlining at the important fact level and summarizing at the main idea level) was

TABLE
Percentage Correct—Mean Scores

	Pretest		Posttest	
	Underlining	Summarizing	Underlining	Summarizing
Main idea	61.91	64.29	83.33	71.43
	(21.82)	(35.86)	(24.15)	(29.88)
Important fact	66.67	52.38	77.38	76.19
	(25.41)	(39.45)	(29.48)	(32.09)

Standard deviation in parentheses

higher on the posttests, but the differences between pretests and posttests were not significant.

Performance on the other two tasks showed significant improvement, however. For underlining at the main idea level, mean posttest performance was 21.42% higher than on the pretest. For summarizing at the important idea level, mean gains were about the same (23.81%). But the pretest performance on that task was much lower than in the other three tasks.

DISCUSSION

The central aim of this study was to examine the effects of graphic organizer training on identification of levels of importance and on summarization of expository text. Earlier studies with similar populations of students had indicated that the underlining training in identification of levels of importance within text could enhance students' summary writing (Weisberg & Balajthy, in press) by increasing their awareness of the differences between important and less important ideas.

The main effect for task in the present study demonstrated that the addition of the graphic organizer task, interposed between the underlining strategy and summary writing, provided even more enhancement of summarization ability. In addition, practice with the graphic organizer task improved students' ability to identify levels of importance in their underlining tasks. In short, one picture can really be worth a thousand words, especially for a disabled reader, for whom words are not always "user friendly."

Very little research has been carried out to locate specific areas of need in poorer readers' comprehension of expository text that are amenable to instruction. An examination of the training by task by level interaction in the present study helps pinpoint key areas of difficulty in dealing with exposition. It also suggests specific indications as to how training in graphic organizers helps poorer readers.

Earlier studies (Weisberg & Balajthy, in press) found that the underlining training alone did improve subjects' ability to identify ideas at the important fact and less important detail levels, but not at the main idea level. In the present study, this underlining training was carried out prior to the pretest, as the purpose was to investigate effects of the graphic organizers. The use of graphic organizers may serve to address a skill not sufficiently learned in the underlining task.

Why did this improvement in identification of main ideas occur? Baumann (1983) found that middle grade youngsters have great difficulty in identifying main ideas in content area text. In the present study, the use of graphic organizers apparently helped poorer readers to identify the single main idea statement in the passage. The subjects, in creating a pyramid-like structure in diagram form, may have been able to distinguish more easily the more general main idea statements from statements at the important fact level. After training, it was this task that the students

performed best, a decided benefit, as identification of main ideas is critical to successful comprehension and to success in school expository reading activities.

The second of the two factors that showed important posttest gains was the summarizing score at the important fact level. Winograd (1984) found that the relationship between poorer readers' identification of levels of importance and the contents of their summaries was not strong. The present study found particularly low pretest scores for summarizing at the important fact level, despite prior training in the underlining task. Students had apparently not understood that a good summative understanding of an expository passage includes more than simply main idea generalizations. The use of graphic organizers greatly helped students recognize the critical importance of including important facts in their summaries. As a result of the explicit training and practice in this study, students dramatically improved in this aspect of performance.

One additional benefit of the graphic organizer task was that the students were encouraged to write summaries in their own words. Earlier attempts by the authors to improve summarizing had resulted in students using the wording of the text passage. In the present study, the passage was removed and the students used their graphic organizers as cues for writing the summary. It was apparent from student comments and later performance reported by their teachers that this procedure gave them a clearer concept of just what is meant by the common instruction, "Write the summary in your own words."

In their analysis of commercial main idea skill development materials, Moore and Smith (1987) found little evidence of any sequenced, systematic instruction. They suggested that such skill development be designed so that it progresses from the simple to the complex, gradually releasing responsibility for performance to the students. This study was designed to evaluate and examine the effects of one stage in such a sequence, that of helping poor readers create a basic understanding of the structure of expository text. It found that use of graphic organizers can make an important contribution to students' recognition of structure and to the quality of their written summaries.

Future investigations must face the issue of ecological validity by investigating the effects of graphic organizers on understanding of actual textbook language. Initial indications using older readers suggest the potential for such transfer to real-life content area materials (Balajthy & Weisberg, 1989; Weisberg & Balajthy, 1989, in press), but application to younger, poorer readers must still be tested.

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APPENDIX

The various states in the United States are different in the natural resources they have—things found in and on the earth that are useful to people. Trees are a major natural resource for making buildings and paper products. The states of Oregon, California, and Washington are the leading producers of lumber. Oregon produces over 600 million cubic feet of lumber per year, while California produces almost 500 million cubic feet. Another major natural resource is oil, which is used to make fuels to run our cars and heat our homes. Texas, Alaska, and Louisiana are the leading producers of oil. Texas pumps 1000 million barrels of oil a year, while Alaska produces 600 million barrels per year.

Analysis of Cue Strategies of Disabled Readers

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Research appears to support the theory that reading is an interactive process in which readers vary attention to the graphic and contextual cues in printed text (Goodman, 1969; Rumelhart, 1980; Smith, 1971). The relative importance of these cues is often inferred from qualitative and quantitative analyses of oral reading errors (Allington & Strange, 1977; Biemiller, 1970; Goodman, 1975; Pflaum & Pascarella, 1980; Weber, 1968). These studies suggest that errors are not randomly made, and inspection of errors can reveal how readers process text. Controversy persists, however, about the relative use of graphic and semantic information as well as the relationship between cueing strategies and reading competence.

Poorer readers relied more heavily on context cues than better readers in studies reported by Perfetti, Goldman, and Hogaboam (1979) and Schvaneveldt, Ackerman, and Semlear (1977). In contrast, results of studies by Au (1977) and Goodman (1975) indicated that skilled readers focused attention more closely on semantic and syntactic information than did poorer readers. Juel (1980) and Schumm and Baldwin (1985) found that better readers attended more closely to graphic information than did the poorer readers, while West, Stanovich, Feeman, and Cunningham (1983) found no definitive differences between good and poor readers in their use of graphic information.

Hood (1975–76), Leu (1982), and Lipson and Wixson (1986) have raised methodological concerns about many of these studies that may contribute to their conflicting results: (1) findings may have been generalized to good or

poor readers without attempting to explain the variability that exists *within* ability groups; (2) errors have often been compared even though readers were reading different texts; (3) findings based on observations of behavior while subjects were reading isolated words, sentences, or short paragraphs have been generalized to the reading of connected discourse; (4) because passage difficulty has not been adequately controlled, errors have often been compared even though readers were experiencing differing degrees of difficulty; (5) statistical findings have been based on varying quantities of errors made by readers within studies; and (6) comparisons have been made across studies even though different error classification systems were used.

The present study was designed to address these six methodological issues with the hope that the controversy about readers' cue strategies may begin to be resolved. To address the first three issues, this study compared cue strategies of two kinds of poor readers—poor decoders and poor comprehenders—while all were reading the same narrative text, a complete story that was designed to resemble a "real" reading task. To deal with the last three issues, the text was designed to allow for analysis of the same number of errors for each reader as each experienced his or her own low, moderate, or high levels of difficulty. By comparing the results with a previous study (Fleisher, 1988) in which the same instrument and error classification system were used to compare the oral reading errors of good and poor readers, it is possible to see whether there is a commonality among poor readers in their cueing strategies or whether subsets of poor readers can be differentiated by the way they use textual cues as they read.

METHOD

Subjects

Fourth-grade children of at least average intelligence who attended a college reading clinic were assigned to one of two groups according to the diagnosed nature of their reading disabilities. Group 1 ($N = 20$) had inadequate print translation skills. Development of automaticity in word recognition and word analysis skills were their primary diagnosed needs based on results on the *Analytical Reading Inventory* (Woods & Moe, 1985), the *Woodcock Reading Mastery Tests–Revised* (Woodcock, 1987), and anecdotal records, when available. Children with these needs were called *poor decoders*.

Group 2 ($N = 27$) had inadequate comprehension skills. Children whose test results indicated adequate automaticity when reading words in isolation or in context, but who demonstrated poor comprehension skills (i.e., not commensurate with their measured intellectual potential) either at the word or passage level according to the *Analytical Reading Inventory*, the *Woodcock Tests*, and anecdotal records were assigned to this group. These children were called *poor comprehenders*.

To qualify for placement in either group, the differential between scores on decoding tasks and scores on comprehension tasks had to be at least 20

percentile points on the *Woodcock Reading Mastery Tests* and one grade level on the *Analytical Reading Inventory*.

Reading Passage

A 927-word story was written in six equal parts, each part corresponding to readability levels 1 through 6 based on the Spache (1953) and Dale-Chall (1948) formulas. The story, therefore, gradually increased in difficulty to ensure that each reader would encounter his or her own individual low, moderate, and high levels of difficulty while reading the story. The story was illustrated and bound so that it appeared to be a book for pleasure rather than testing material.

The attempt to control for passage difficulty may have introduced a confounding variable, that of prior contextual information. Since they were more efficient decoders, the poor comprehenders tended to read farther into the text than did the poor decoders before satisfying the criteria for low, moderate, and high levels of difficulty. Therefore, the poor comprehenders had more contextual information available to them. Anticipating this problem, the text was written to minimize the effects of increased contextual information. Each part of the story was designed to be as independent of the others in vocabulary, setting, and events as possible while maintaining the integrity of the story line. The character of the central figure was delineated in Part 1, which all the readers were able to complete, and each subsequent part was a different adventure of the main character.

Alone in study carrels, subjects were audiotaped while reading the entire story aloud, ostensibly to seek their opinions about the story's difficulty and entertainment value. The tapes were later transcribed so that errors could be counted and classified.

Scoring Procedures

Low, moderate, and high levels of difficulty were defined by the frequency of errors made by each reader within 100 consecutive words of text (Betts, 1954; Karlin, 1971). When a subject made no more than 2 errors within 100 consecutive words, the point at which the 2nd error occurred was designated as his or her low level of difficulty (D_1). The first time a reader made 5 errors within 100 consecutive words, the point at which the 5th error occurred was designated as his or her moderate level of difficulty (D_2). When the reader made 10 errors in 100 consecutive words, the point at which the 10th error occurred was called his or her high level of difficulty (D_3). The 2 D_1 errors, the 5 D_2 errors, and the 10 D_3 errors of each subject were analyzed. It was therefore possible to monitor and compare the kinds of errors made individually by subjects as each was experiencing low, moderate, and high levels of difficulty while all were reading the same text.

All responses that differed from the text were counted as errors and were classified as meaningful (M_1) or meaningless (M_0) within the context. They were also classified as graphically similar (G_1) or graphically dissimilar (G_0) to the text. In each of the following examples, the word in parentheses was substituted for the expected response, *palace*.

G_1M_1: The king was in his palace. (*Porsche*)
G_0M_1: The king was in his palace. (*castle*)
G_1M_0: The king was in his palace. (*police*)
G_0M_0: The king was in his palace. (*moon*)

Errors met the criteria for graphic similarity to the text (G_1) if the first letter of the printed text matched the first letter of the error (Biemiller, 1970). Letter reversals or word order changes were also classified as G_1 (Hood, 1975–76), as were substitutions in which all but the first letter were the same. All other errors were given a graphic similarity rating of G_0. The criterion for contextual appropriateness was whether the error was meaningful within the context of the sentence (Burke, 1986). Omissions and insertions were scored G_0M_0 if they rendered the context meaningless and G_0M_1 if they resulted in a semantically acceptable sentence.

RESULTS

The percentages of each of the four error types that occurred at each difficulty level were calculated for each subject. This was the dependent measure. In order to test for statistical significance, a three-way mixed ANOVA design was used. The between-subjects variable (diagnosed nature of the reading problem) had two levels: poor decoders and poor comprehenders. The ANOVA indicated significance for the main effect of diagnosed problem, $F(1, 45) = 11.52$, $p < .001$. The first within-subjects variable (difficulty) had three levels: low (D_1), moderate (D_2), and high (D_3). The second within-subjects variable (error type) had six levels: G_1M_1, G_1M_0, G_0M_1, G_0M_0, all G_1 errors, and all M_1 errors. The ANOVA yielded statistical significance for the main effects of difficulty level $F(2,90) = 6.922$, $p < .001$ and error type $F(5,225) = 99.55$, $p < .001$. Table 1 displays the means and standard deviations for the proportions of each of the error types to total errors at each of the three levels of difficulty for poor decoders and poor comprehenders. Tukey's procedure for post hoc comparisons was applied to the means. Table 1 indicates all significant comparisons.

Meaningful Errors

Statistically significant differences between poor decoders and poor comprehenders were observed in the proportion of G_1M_1 errors at D_2 and D_3. The performance curves for this type of error are shown in Figure 1, upper left. At D_1 no differences were observed between the two groups on errors that were both meaningful and graphically similar to the text. However, when reading at moderate and high levels of difficulty, poor

TABLE 1
Percentage of Error Types at Three Difficulty Levels

Error type	Poor decoders $N = 20$						Poor comprehenders $N = 27$						Significant comparisons
	D_1		D_2		D_3		D_1		D_2		D_3		
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	
C_1M_1	55.00	39.40	58.00	30.78	40.00	17.17	46.36	36.50	16.30	17.57	17.04	15.89	B, c, d, e, h, i
C_1M_0	17.50	29.36	28.00	28.58	35.00	16.58	27.78	34.90	58.52	31.88	65.19	25.76	B, C, F, G, H
C_0M_1	25.00	34.41	16.00	24.79	21.50	14.61	25.96	32.14	11.11	16.05	7.78	10.13	c, d, E
C_0M_0	2.50	11.18	1.00	4.47	6.50	9.88	.00	.00	6.07	11.08	8.89	10.13	
$C_1M_1 + C_0M_1$	80.00	34.05	66.00	32.51	61.51	21.34	72.22	34.00	27.41	26.11	22.59	18.10	B, C, D, F, H
$C_1M_1 + C_1M_0$	72.50	34.52	78.00	30.37	75.00	15.80	74.01	32.14	74.81	29.14	80.00	20.75	

Capital letters: $p < .01$
Lower case letters: $p < .05$

A Poor decoders vs. poor comprehenders at D_1
B Poor decoders vs. poor comprehenders at D_2
C Poor decoders vs. poor comprehenders at D_3
D D_1 vs. D_2, poor decoders
E D_1 vs. D_3, poor decoders
F D_2 vs. D_3, poor decoders
G D_1 vs. D_2, poor comprehenders
H D_1 vs. D_3, poor comprehenders
I D_2 vs. D_3, poor comprehenders

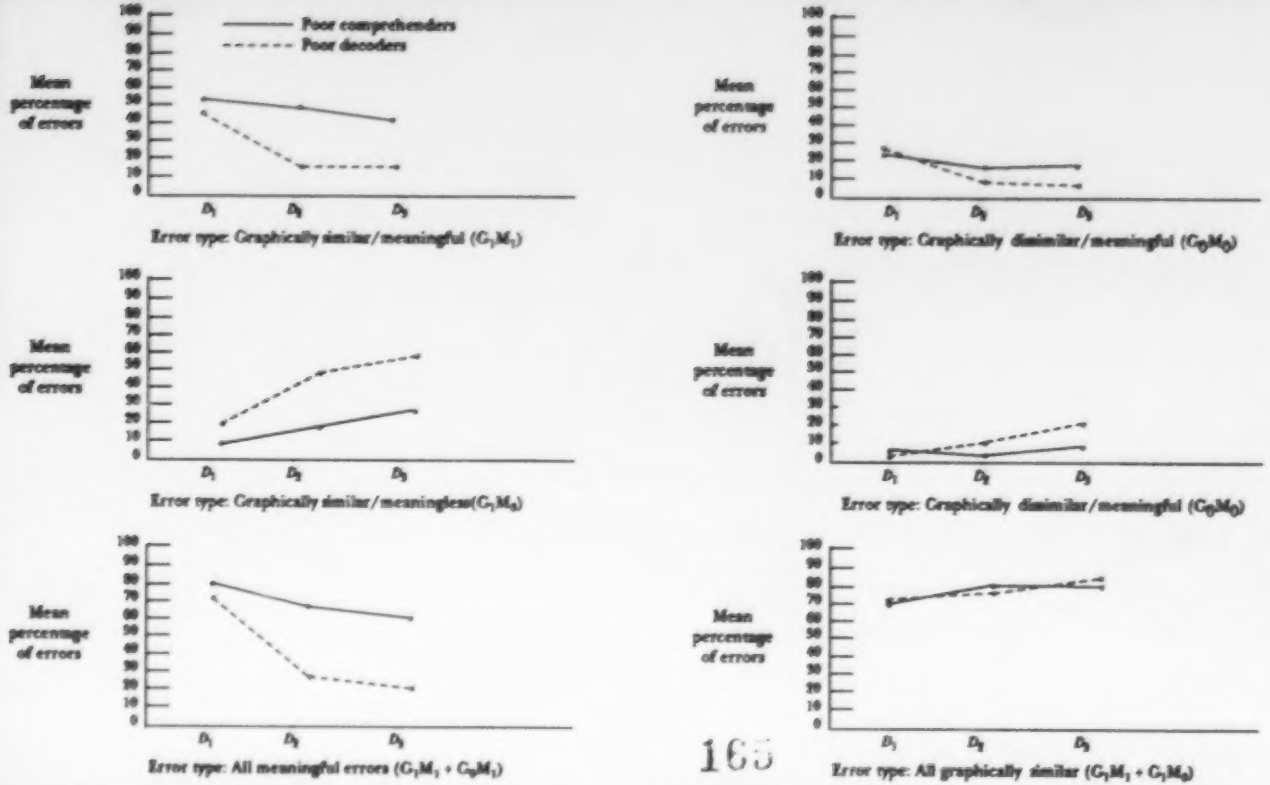

Figure 1. Mean percentages of errors by error types at three difficulty levels.

decoders maintained attention to both semantic and graphic cues while poor comprehenders made significantly fewer of these kinds of errors.

Figure 1, upper right, shows the performance curves for G_0M_1 errors. Statistically significant differences between the two groups were found at high levels of difficulty where poor decoders maintained closer attention to meaning than to graphic similarity, $p < .01$. At low and moderate levels of difficulty, both groups made errors of this type in comparable proportions. However, poor comprehenders made significantly fewer of this type of error at moderate and high levels of difficulty than they had at low levels, $p < .01$.

Figure 1, lower left, shows that when both types of meaningful errors were combined ($G_1M_1 + G_0M_1$), statistically significant differences were obtained at D_2 and D_3 between poor decoders and poor comprehenders, $p < .01$. At moderate and high levels of difficulty, poor decoders made more errors that were meaningful within the context than did the poor comprehenders.

Graphically Similar Errors

Findings about errors that were both graphically similar to the text and meaningful have already been described (Figure 1, upper left). For errors that were graphically similar to the text but meaningless (G_1M_0, Figure 1, middle left), post hoc tests indicated significant differences between poor decoders and poor comprehenders at D_2 and D_3, $p < .01$. At moderate and high levels of difficulty, poor comprehenders made significantly more of this type of error than did the poor decoders.

When both types of graphically similar errors were combined ($G_1M_1 + G1M_0$, Figure 1, lower right), no significant differences were observed between the two groups. Furthermore, no significant differences were found for errors that were graphically dissimilar and meaningless (G_0M_0, Figure 1, middle right). Indeed, this type of error that was cued by neither graphic nor semantic constraints accounted for fewer than 8% of the errors made by either group.

DISCUSSION

Two questions were addressed in this study. First, were there differences between poor decoders and poor comprehenders in their attention to graphic and semantic cues in printed text? Second, as the reading task increased in difficulty, did poor decoders and poor comprehenders alter their cueing strategies in different ways? The results suggest that among disabled readers in the fourth grade, priorities for graphic and semantic information were different depending on the nature of their reading disability and the degree of difficulty they experienced.

Both groups focused primary attention on semantic information when they were experiencing low levels of difficulty. Often their errors were graphically dissimilar to the text. Errors at this level were often inconsequential (reading *a* as *the*). Sometimes words were inserted that actually enhanced the text (*not*

soft was read as *not too soft*). Readers in both groups omitted words or combined sentences that did not result in meaning changes.

As reading became more difficult, however, cue strategies appeared to be different for the two groups. The poor decoders appeared to maintain attention to both meaning and graphic information. They were not able to decode all words correctly, but they seemed to recognize the necessity of using graphic and semantic cues simultaneously. Over 40% of their errors were of this type. On the other hand, only 17% of the poor comprehenders' errors were of the G_1M_1 type. The data indicate that as text difficulty increased, the poor comprehenders continued to seek out the graphic cues but lost sight of much of the meaning. They did not seem to use graphic and semantic cues simultaneously. In fact, 58% to 65% of poor comprehenders' errors were graphically similar to the text but meaningless at moderate to high levels of difficulty. An example follows:

Text:	He ran as fast as his *wounded* legs could run.
Poor Comprehenders:	...*wondered*...
Poor Decoders:	...*wooden*...

In addition, 32% of the poor decoders made verbal expressions of dismay about not being able to "make sense" of the context while only 11% of the poor comprehenders made such comments.

A variety of possible explanations comes to mind. Perhaps poor comprehenders suffer from such a meager repertoire of words that they are less able to make meaningful choices within the graphic constraints of the text. In addition, poor comprehenders may tend to rely on the graphic array since it is concrete and verifiable while meaning is abstract and risky. Furthermore, they may be less able to focus on several attributes (or cues) at once, especially as the demands of the reading task increase.

The error-type curves of the poor decoders actually resembled closely the error-type curves of the better readers in an earlier study that compared better and poorer readers using the measuring instrument and classification system used in this study (Fleisher, 1988). Findings from that study indicated that better readers were more strongly cued by contextual than graphic information at high levels of difficulty. The error-type curves of the poor comprehenders in the present study, on the other hand, more closely resembled those of the poorer readers in the earlier study whose errors, as a group, appeared to be more graphically than contextually constrained.

What are the implications for instruction? Results may indicate that (1) instructional emphasis should be different for poor comprehenders than for poor decoders and (2) methods of assessment should focus more on discovering the nature of the disability than on the degree of disability.

Poor comprehenders may profit from instruction that particularly stresses that the gaining of meaning is the primary purpose of reading. Perhaps they could be taught how to give themselves feedback while they read—specifically about whether the words they decode make sense. "Does

that make sense?" might be the more useful teaching tack than directing the pupil to "sound it out." Poor comprehenders appear to be focusing on the orthographic constraints of the text but are perhaps giving too little attention to the semantic structure and sense of the text. Poor decoders, on the other hand, may profit from instruction in effective decoding or in learning alternative methods of word identification.

Conventionally, assessment of reading performance tends to use grade level as a reference point; that is, how far above or below grade level norms readers are functioning. Unquestionably, quantitative comparisons are useful. Equally helpful, however, is discovery of the qualitative nature of the disability in order to develop a prescriptive program that is appropriate to specific needs. Readers experiencing comparable quantitative deficits may not be experiencing comparable qualitative deficits. Initiation of reading instruction at appropriate levels is only one ingredient of an effective remedial program. Accurate assessment of readers' cueing strategies as they process text may be at least as important.

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Criteria for Decisions: Best Methods for Whom?

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The reading clinic at Kean College operates to assist remedial students and to provide internships for graduate students in the M.A. Program in Reading Specialization. The age range of the children we see is 7 to 18, or approximately grades 2 to 12. Referrals come from schools and parents of children who have attended previously.

While all clinics have different philosophies and prefer different methods, there are some decisions that all must make. How should the clinician determine the best instructional method(s) for each child? What criteria determine the decisions? This paper presents the philosophy and thinking involved in one college-based reading clinic.

In considering these decisions, one should recall some historical trends in reading instruction. Remediation of reading difficulties in a clinical setting has been beset with changing fads and fashions, as has every other mode of education. In the 1930s and 1940s, the most popular diagnostic tools were Durrell's *Analysis of Reading Difficulty* (1955), Gates-McKillop *Reading Diagnostic Tests* (1962), and informal reading inventories.

We went through a period when our clinic students, as well as entire first-grade classes, were given intensive training with perceptual materials. This was to be certain that they were "ready" to learn to read. Although some of the materials had merit, Spache's (1976) review of the research eventually showed that training with perceptual materials improved scores on perceptual tests but had little or no effect on reading achievement.

The 1960s and 1970s brought a plethora of new tests, each claiming to measure some important aspect of the reading process. Most centered on auditory and visual skills, visual and motor integration, and learning styles and personality assessment. For example, replacing the simple audiometer tests, we now have the *Goldman, Fristoe, and Woodcock Auditory Skills Test Battery* (1974). This package yields scores on auditory acuity, discrimination, figure-ground, memory, background noise, and so forth. Thus, instead of a brief 25–30 minute appraisal, we now have a 1 1/2–hour or more detailed auditory measure, each section of which is purported to be essential to the reading process. This same type of example could be replicated in many other areas.

For many years, clinics were obsessed with determining if a child was an auditory or visual learner. The thought was that auditory learners should be taught with auditory methods. Research by Ringler, Smith, and Cullinan (1971), however, showed that in controlled situations where instruction was given by preferred methods, there were no significant differences in reading achievement. This finding may have several causes:

1. We do not determine the degree or quantity of preference in visual versus auditory learning.
2. Our tests, good as they are, lack sufficient refinement to make these determinations. One test is insufficient; we need corroborating checks on these results. In our clinic, I rarely allow a statement regarding a strength or weakness unless there are at least two corroborating separate measures.
3. Since reading is a visual task, vision cannot be eliminated. The question is, therefore, does the addition of auditory, tactile or kinesthetic input help?

During an informal survey of college-based clinics 10 years ago, I found that some were using as many as 15–20 different diagnostic instruments. The types of tests and assessments given in diagnosis will have a strong effect on the remedial method selected. One example is the *Minnesota Percepto-Diagnostic Test* (Fuller, 1982), in which the child is classified as *dissociative, emotional,* or *organic.* There is no *normal* classification.

In the past, our graduate students were burdened with administering tests, being certain they obtained the correct bases and ceilings, scoring accurately, and following the manuals precisely. One time, to make a point, I asked, "What color were the child's eyes?" Not one student knew. Of course, there is no relationship between eye color and reading skill, but I wanted them to realize that they hadn't really "looked" at the children—observed them, their actions, or their habits.

I believe strongly that diagnostic teaching is the safest and most effective procedure. However, because our clinics are set up with separate diagnostic and remedial courses, we do a separate diagnosis. At present, we administer the following types of tests to all students: standardized and informal reading achievement tests, vision and hearing screening, tests of components of reading (e.g., language, blending, auditory discrimination), personality and intelligence tests, and spelling and handwriting samples.

When a severe deficit or weakness is evident, we add a corroborating measure.

Some basic decisions must be made for the selection of remedial methods and instruction. The following criteria can help guide these decisions:

1. Does the addition of auditory, tactile, or kinesthetic input actually assist the child in learning more easily or quickly? We do trial lessons to determine this. If the answer is "yes," we continue; if it makes little difference, we stop.
2. Does the child learn better analytically or synthetically, or is there little difference? Can the child learn whole words, or is the single letter, word family, or syllable his or her "gestalt"? Sight words, or Fernald or Cooper methods are usually effective with children who learn analytically. If the child learns better synthetically, then Orton-Gillingham-Stillman (Orton, 1937) or Hegge-Kirk (1955) are effective. Synthetic methods are ineffective for children who cannot discriminate individual sounds or blend sounds.
3. If the child has experienced failure with the method used in school, it is wise to remediate with an entirely different approach. Over the past 25 years, I have observed that primary children who fail in school can succeed in the clinic when remediation is based on an entirely different method. During the time when Language Experience permeated school districts, children who had failed with that method responded well to a strong decoding program. When the *Open Court Series* (1970) was most popular, those who failed with it responded well to a more holistic program. At present, whole language is the prevailing fashion, and children who fail in it progress well with a structured, decoding method.
4. Summarizing the strengths and weaknesses from diagnostic testing is very helpful. But the real question is what quantity makes one factor a strength or weakness. To me, differences in test data should be substantial to determine strengths and weaknesses. Small differences are unacceptable. Another concern is the environment for testing, which may differ from the environment for teaching.
5. The interest in personality types and learning styles is a recent development in diagnosis. The advantage is obvious: if one learns in a manner commensurate with his or her natural inclinations, learning should be easier. There are many approaches to the area:

- independent vs. dependent
- holistic vs. fragmented
- left brained vs. right brained
- cognitive vs. affective.

Although all this information is helpful, we should remember that most of the data are compiled from questionnaires, and thus depend on truthful answers. Children can skew the answers to reflect desired results. The *Boder Test of Reading-Spelling Patterns* (1982) and the *Mills Learning Test* (1964) are exceptions as they test actual abilities.

Much of the philosophy of the whole language movement (Goodman, 1986; Raphael, Kirschner, & Englert, 1988) is applicable to clinical work. The integration of all the language arts uses multimodal approaches, thus providing input via all the senses. In our clinic, we have recently increased the time spent on inviting children to read silently for pleasure, having children write more about the text or themselves, predicting and confirming story endings, reading to children, and using paired reading strategies. As Hansen (1987) notes, writers become readers; our remedial readers will read what they write as eagerly as developmental readers. Moreover, ownership of a piece is a strong motivation for further writing. We also spend considerable time and thought "matching" the right book to the right child, something at the independent level that really interests the reader.

Most of the children in our clinic are dependent learners. They have low self-esteem, need frequent reinforcement, and are afraid to take risks or try something new. They need structure in the learning process (i.e., direct instruction with guided practice, application, and use of skills). We believe that this is the only way to guarantee transfer of learning for them. However, it is also important to offer opportunities for independent learning and to observe their reactions.

An important factor in remediation is providing practical assistance with the students' texts in content areas. We teach study skills directly using students' own textbooks. This enables children to "save face" in class, in addition to learning the content. If the discrepancy between the child's reading level and the text level is great and precludes any reading, we read the text aloud. This provides background and enhances listening skills.

We have a 70–80% rate of success with our serious remedial readers. To us, success can be measured by (1) a distinct change in attitude as shown by a student now working, reading, and learning independently; (2) a significant reduction between the instructional and expected reading levels; and/or (3) an increase in the child's rate of achievement. Until we have better diagnostic instruments, the best we can do is to make a broad assessment, prescribe the remediation, and monitor constantly.

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CHALLENGES IN COLLEGE AND ADULT READING

Developmental Education Students' Perceptions of Effective Teaching

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In the recently published Carnegie Foundation for the Advancement of Teaching's study of undergraduate education in America, Ernest Boyer (1987) pinpointed a general mismatch between faculty and student expectations in higher education classrooms. He noted that for effective learning to occur, faculty and students must view themselves as having important business to do together in the college classroom. Thus, in successful institutions of higher education, "good teaching is at the heart of the undergraduate experience" (p. 159).

Boyer's focus on good or "effective" teaching reflects a renewed effort in recent years to identify what works in higher education teaching and learning. One major strand of research has emphasized the characteristics of effective teaching. For example, Sherman, Armistead, Barksdale, and Reif (1987) identified five research-based characteristics of teaching excellence: enthusiasm, clarity, preparation and organization, ability to stimulate interest and thinking, and knowledge of the subject matter. Murray (1985) studied the relationship between teaching behaviors requiring minimal inference that are directly observable and student instructional ratings. His results indicated that expressive speaking, use of facial expressions and humor, and encouraging student questions and comments were among the most important effective teaching behaviors in college classrooms. Most recently, faculty members at Miami-Dade Community College attempted to identify the "core of fundamental characteristics" of classroom excellence (Heller,

1988) in an effort to improve the quality of teaching for an increasingly diverse population of students. The 30 desirable effective teaching traits they identified included enthusiasm, respect for and availability to students, encouraging independent thinking and analytical listening, and providing varied ways for students to learn

If effective teaching is important for the undergraduate population as a whole, it is critically important for academically underprepared students. Boyer (1987) believes that American undergraduate education cannot be strengthened unless top priority is given to teaching reading and writing to incoming students who lack sufficient mastery of these tools for college success. Such instruction is usually provided through learning assistance or developmental education courses currently found at over 60% of the four-year and 80% of the two-year colleges in the United States (Lederman, Ribaudo, & Ryzewic, 1985).

The importance of effective teaching for underprepared college students has been highlighted by practitioners and researchers in the field. Obler (1983) believed that instructional faculty in developmental programs should possess the key qualities of competence and caring. In her examination of profiles of success among low-achieving adult college students, Burnham (1983) interviewed developmental education program directors who unanimously identified instructor behavior as the single most important factor in program success. Finally, Sueanne Roueche (1983) found that full-time faculty in academic disciplines who volunteer for assignments in basic skills programs are a critical element in the success of such programs. Although these studies have illuminated effective teaching in the developmental education realm, further research using varied methodologies is needed.

The purpose of this study was to explore developmental education students' perceptions of the components of effective teaching. These learner-based perspectives can contribute an important piece to the puzzle of identifying the best teachers for academic assistance programs. When our most effective instruction serves our most academically needy students, the prospects for their successful transition to and negotiation of the college environment will be maximized.

METHOD

Informants

Informants for the study were 14 college students, currently in their fourth year of study at a large midwestern university. They had been required to enroll in a developmental reading improvement course during the first semester of their freshman year, based on ACT and standardized reading achievement test scores; many were also placed in developmental English and mathematics courses during their freshman year.

At the time of the study, informants had completed an average of 85 semester credit hours of college work; their average cumulative GPA was 2.46 on a 4.00 scale. Their academic majors varied; four students were pursuing education-related majors, three were enrolled in business-related majors, and one was a food service major. Interestingly, 6 of the 14 students had official majors of "undeclared," general studies, or some form of preprofessional studies (e.g., prebusiness). Their relatively low grade point averages may account for this since several professional programs (e.g., business, journalism) require a 2.50 grade point average for formal admission.

The study was conducted during students' first semester of their fourth year of college. These students had successfully made the transition from the high school culture to the college culture and had persisted through an average of six semesters of college coursework. This longevity provided them with a broad experiential base from which to draw incidents of effective and ineffective teaching at the college level. As one student stated,

> I feel that the higher you go, the more intelligent the instructors become and also, the fact that I've matured more and more to where I understand and really appreciate what it is they are teaching and to know if it is or isn't effective.

Data Sources

Data were collected through use of a questionnaire based on the critical incident technique developed by Flanagan (1954). This research technique is a systematic effort to gather specific incidents of effective or ineffective behavior with respect to a designated activity. Students were asked to relate, in written detail, one incident during their college course work when they had experienced effective teaching and one incident when they had experienced ineffective teaching. Directions for the effective teaching incident stated: "Think about a college class you have had where you felt the teacher was very effective. Describe in detail exactly what the teacher did in that class to make you feel he or she was effective." A letter explaining the purpose of the study accompanied the mailed questionnaire. An identical questionnaire was mailed to nonrespondents approximately three weeks later. The questionnaire also asked students to designate their willingness to participate in a brief follow-up interview directed toward expanding the data provided in their written responses.

Fourteen students from a group of 51 returned questionnaires, and 8 completed the semistructured follow-up interviews that probed the critical incidents and that sought students' advice to college teachers about how to teach effectively. Interviews lasted for approximately 20 minutes.

The interviews were taped and transcribed. Data from both the written questionnaires and oral interviews were reviewed to identify items related to teaching effectiveness (Spradley, 1979). These items were analyzed inductively to identify superordinate domains or categories. Researchers

analyzed and agreed upon domains. Differences were resolved through discussion. The domains form the basis of the discussion of results.

RESULTS

Analysis of the data yielded 78 specific items from student descriptions of effective teaching critical incidents and 61 items from descriptions of ineffective teaching critical incidents. In addition, informants provided 14 items of advice on being an effective teacher. Three broad domains were identified: instructional characteristics, interpersonal characteristics, and personality characteristics. Instructional characteristics related to the manner in which classroom instruction was conducted by the teacher. Interpersonal characteristics related to the type and quality of teacher interaction with students. Personality characteristics involved descriptions of teacher behavior not necessarily related to interaction with content material or students (e.g., enthusiasm, confidence). The following table provides a breakdown of items by domain.

Table
Number of Items in Domains

Domain	Effective teaching	Ineffective teaching	(Percentage of total items)
Instructional	40	33	(52.5)
Interpersonal	22	14	(25.9)
Personality	12	11	(16.6)
Other	4	3	(5.0)

Instructional Characteristics

The instructional characteristics domain was the largest for both effective and ineffective teaching; these items comprised approximately one-half of the total. This broad domain was comprised of three subcategories: lecturing style, course requirements, and methods of facilitating learning. The lecturing style of effective teachers is one that presents the content in a clear, concise, comprehensible, and interesting manner. In delineating how an effective lecturer can influence the students' orientation to success, one subject stated "he had a way to communicate something to a group with so much confidence, not to mention competence. . . .my esteem was very low. . . .Dr. — changed that view I had and gave me confidence, academically, about myself."

The lecturing style of ineffective teachers ranged from "monotone" to "mile a minute," but the common characteristic was that students experienced difficulty with understanding the content as presented. One ineffective lecturer "would use terms like *whatchamacallit* and *thingamajig*" when explaining the content to students. Another teacher lectured "almost like he was talking to four walls" and, in the assessment of the student, "he didn't get his points across when he went before the class." Perhaps the most telling indictment of the impact of ineffective lectures on student learning was described in this manner: "Every day he came into class, put his notes on the podium and lectured until the last minute. . . . I took 8–12 pages of notes each class period. . . there was no variety in this class. . . he did not move from behind the podium."

Items in the subcategory of course requirements emphasized tests and quizzes in both effective and ineffective teaching incidents. Effective teachers were "fair" in their testing, and students viewed quizzes given by these teachers as a motivating tool to keep up with the work. More importantly, effective teachers helped students prepare for tests and in one instance requested student input before constructing the final exam.

The tests of ineffective teachers were described as "lengthy" and having "too many problems. . . for the amount of time available." In addition, ineffective teachers provided few opportunities for feedback on student learning: "The course was not structured well — not enough exams and the homework was not collected." Additional items identified in the course requirements subcategory included class projects and grading scales. One effective teacher assigned class projects that were "right on target." The grading scale of an ineffective instructor was described as "not making any sense at all."

Methods of facilitating learning was the third subcategory of instructional characteristics. Effective teachers were successful in actively engaging their students in learning through a variety of methods. Sharing experiences, relating lectures to textbook material, "explaining complicated concepts by relating them to everyday life," and getting everyone actively involved in discussion were some of the strategies utilized by effective teachers. Ineffective teachers were not prepared for class, "rarely showed examples," and did not "teach material that was important to the tests." The distinction between effective and ineffective teaching in this subcategory is best expressed by the following two statements:

. . .she made class a challenge but something you could tackle and feel accomplishment when you were done.

Ineffective teachers are those who are interested in getting through the stuff.

Interpersonal Characteristics

Approximately one-quarter of the total number of items comprised items about interpersonal characteristics. In relating their incidents, students

provided evidence of both inside- and outside-of-class interpersonal behaviors of effective teachers. In general, effective teachers took the time to tend to the learning needs of their students.

In class, effective teachers were able to "read" their students and adapt instruction accordingly. For example, when one teacher "looked at students and sensed she wasn't getting across, she would revise her wording." In another class, the teacher "changed the whole syllabus half way through the semester when she realized students weren't responding." Effective teachers also acknowledged and accommodated a range of student ability in their classes. One student believed that the teacher "understood that there were students with different levels of ability" in the class. Another student noted that "whether or not you could perfect your skills, the teacher accepted you."

Outside of class, students depicted the effective teacher as a willing helper. The simple act of holding regular office hours "to help students with any problem they had" suggests that effective teachers have a concern for more than just the academic life of the student. Students also identified the establishment of after-class study or help sessions as a valuable service provided by effective teachers. As one student summarized, "She wanted more to help students learn than just showing up every day."

The interpersonal characteristics of ineffective teachers consisted of either a negative judgment of students' abilities or an unwillingness to help students when requested. For example, one student reported the teacher's admonition during the first class session: "If you don't show up, you will fail the exams because it's mostly on class lectures and I usually fail half of my class each semester." Another student described the ineffective teacher's reaction to questions: "If a student used to ask a question, no matter how simple, he got upset — it seemed to make the class afraid to ask questions." Finally, one student had both problems with a teacher: "When I asked for help, he was sarcastic and rude to me — lots of times he cut down the freshman class and how ignorant they were."

Personality Characteristics

Items relating to personality characteristics of effective and ineffective teachers comprised approximately one-sixth of the total items. Students identified caring, confidence, and a good-natured attitude as the primary personality attributes of an effective teacher. Students also believed it was important for the teacher to convey an enthusiasm for teaching ("Everyone could tell he enjoyed the class") and attempt to make the class interesting ("The instructor was dramatic, it was like a show").

The most striking description of an ineffective teacher was one who "had an explosive temper, he often kicked things and yelled quite frequently." Another student stated that the teacher "had an attitude that he was better than everyone else" and believed that this contributed to his ineffectiveness in the classroom.

Advice to Teachers on Effectiveness

Of the 14 items provided when students were asked to give college teachers advice on how to teach effectively, 6 related to the interpersonal characteristics domain. Students seemed most intent on advising teachers to help and care about the students in their classes as expressed by this statement: "Take time out with students — don't just lecture, get to know your students, who they are, what they are like." There were four items related to each of the personality and instructional characteristics domains. Students believed that their teachers should "have a general positive attitude about teaching" and should "make a joke now and again even if it's about the subject." Instructionally, teachers were advised to better guide students in preparing for tests and to not "be so rigid in grading."

DISCUSSION

The exploratory nature of this study and the relatively small number of informants impose natural restrictions on drawing any general conclusions from the results. Nonetheless, it appears that the former developmental education students in this study identified characteristics of effective teaching that are consistent with previous research on the subject. The three broad domains that capture the characteristics the students provided could also describe the characteristics identified in previous research (e.g., Murray, 1985; Obler, 1983; Sherman, et al., 1987).

It is interesting to note that students in this study seemed to focus more on how they were taught than on what they were taught. Although they identified the actual names of classes and teachers while relating their critical incidents, only 3 of 78 items specifically pinpointed knowledge of content as an effective teaching characteristic. Students may have assumed this knowledge, but further research would help to explain why students elected to focus primarily on teacher behaviors rather than teacher knowledge of subject matter, especially since the latter has been identified by others as important (e.g., Sherman et al., 1987).

Involvement and interaction with students, both during and outside of classes, were important criteria of teaching effectiveness for the students in this study. Although Astin (1977) identified the importance of faculty-student interaction for student satisfaction with college, few other catalogs of effective teaching behavior include this interpersonal domain. For these developmental education students, effective teachers seemed to be those who cared about student learning and were willing to take the time to become involved in the academic and personal growth of their students. Ineffective teachers offered negative judgments on student learning ability and abrogated their responsibility to serve as a resource for answering student questions and fostering student development. This finding, too, deserves further study, as it may have implications for curricular

conceptualization and faculty load, among other concerns, in developmental education programming.

The results of this study generate a plethora of issues in need of further research. Do developmental education students' perceptions of effective teaching change over time in the college setting? What is the role of effective teaching in the holistic development of the underprepared student in the college setting? What compensatory strategies do developmental education students employ when confronted with ineffective teaching? Examination of any of these issues would contribute to the knowledge base on effective teaching in higher education as well as improve the practice of providing services for developmental education students.

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"At-Risk" College Students: Their Perceptions of Reading

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Many college students today are being required to enroll in developmental reading classes because admissions officers believe, based on test scores and prediction formulae, that their abilities are insufficient for the demands placed upon them at the college level. These students are in danger of school failure and thus, are labeled *at-risk* (Vacca & Padak, 1990). A variety of data sources is used to identify these at-risk students. They are considered to be at risk if their ACT/SAT test scores are low, if their high school grade point average is low, or if they fail to perform well on college placement tests. Once these students are placed into the at-risk category, they usually find themselves in a developmental reading class. Such classes are designed to improve students' comprehension, reading speed, vocabulary, study skills, and content area reading abilities.

Collecting information about students' skills and abilities is relatively easy. Students who are enrolled in such classes have demonstrated weaknesses in reading ability on standardized college admission tests. Through formal or informal testing, further evidence of the students' abilities is easily obtained. While documentation of students' academic strengths and weaknesses is rather routine in today's developmental reading classes, little emphasis is placed on obtaining data concerning affective factors that influence reading.

Historically, however, educators have been concerned with the affective factors influencing reading. In 1948, Witty suggested that developmental

reading classes should include reading experiences to help students satisfy personal needs and develop habits in leisure reading. Russell (1961) stated that "the developmental reading part of the reading program is concerned with the growth of reading habits, skills and attitudes needed for living in modern society" (p. 323). Harris (1962) argued that functional and recreational reading were important in a developmental reading program.

Flood and Lapp (1990) believe that effective comprehension results from the interaction of four sets of important variables. One of these variable sets, labeled *reader variables*, includes the affective domain. Cheek, Flippo, and Lindsey (1989) suggest that affective factors such as attitude and self-concept are likely to be influential in motivating students to read. Students' perceptions of what reading is or is not and their perceptions of their own abilities affect their ability and desire to read for school as well as pleasure.

Before instruction begins, it is important to determine what the students already know (Ausubel, Novak, & Hanesian, 1978). Thorndike and Hagen (1969) suggest that the evaluation of students' abilities accomplishes two goals: (1) it provides the teacher with evidence relevant to the objectives of instruction and (2) it clarifies for students what skills, abilities, and knowledge are important.

Students' self-images as readers have been shown to affect their ability and desire to read. Nist and Hynd (1985) found that students' self-images as readers could be improved. After enrolling in developmental reading classes, most of the students indicated that they viewed themselves as readers. From the information provided, it could be assumed that prior to taking the classes, students did not consider themselves readers. Additionally, Reed (1989) suggests that students who are advised to enroll in developmental reading courses often claim they do not need the courses and that they already know how to read sufficiently well to pass college courses.

The purpose of this investigation was to find out how students define reading and to describe their perceptions of their ability to read. A total of 191 freshmen (118 females and 73 males) enrolled in a developmental reading class were asked to respond in writing (survey format) to 10 questions. Three of the questions related to their definitions of reading and their perceptions of their reading ability. The students were surveyed at the beginning of each semester in the 1988–89 academic year. Students enrolled in the class had scores on the reading comprehension subtest of the *Scholastic Aptitude Test* less than or equal to 290. The following is a summary of the results of the survey.

QUESTION 1: WHAT IS YOUR DEFINITION OF READING?

Asking this question to any group of people produces a variety of responses, and the at-risk college students were no different. After scanning the

definitions and attending to the vocabulary used by the students, the researchers organized the responses into four categories: empirical, rationalist, interactive, and functional. Prior to sorting the definitions into the categories, the researchers randomly selected 20 of the responses and categorized them to establish interrater reliability. Rater agreement was achieved on 90% of the definitions. The students' responses were then categorized according to the kinds of words they used to define reading (see Table 1).

Empiricist Definitions

A total of 44% of the students' definitions were classified as *empiricist* (skill related or bottom up). These definitions were grouped into four subcategories: phonics, words, sentences, and skills. Definitions placed into the phonics subcategory included a method of receiving information by written symbols, the sounding out vowels and consonants to create words, the interpretation of letters and symbols to form words and sentences, the ability to pronounce words, and the identification of letters and words.

Definitions that emphasized the understanding of words were grouped into another subcategory of empiricist responses. Definitions such as understanding words and what they mean, reading word for word from a book, comprehending words that are parts of sentences, and putting words together were included in this subcategory.

References to sentences were placed into a third empiricist subcategory. Definitions included putting words together that are grammatically correct, looking and passing by a group of words in a sentence, and looking at a group of words in a sentence.

Some of the students believed that reading was related to a specific skill. They defined reading as drawing conclusions and selecting main ideas. Others believed that reading was looking at materials at a certain rate.

TABLE 1
Distribution of Responses to Definitions of Reading

Category of definition	Percentage
Empiricist (Bottom up)	44
Phonics	3
Word	26
Sentences	3
Skill	12
Rationalist (Top down)	41
Comprehending, understanding, interpreting	25
Learning	16
Interactive	5
Functional	10

Rationalist Definitions

Forty-one percent of the responses were classified as *rationalist* (top-down, holistic, or comprehension-based) definitions, which used the words *comprehending, understanding,* and *interpreting.* Students defined reading as the comprehension of written materials, understanding and comprehending materials, understanding printed materials, interpreting information from printed materials, knowing what something means, and explaining what something means.

Students also defined reading as learning. They said that reading was a concept of understanding something—enhancing one's mind, gaining knowledge by understanding a certain text, learning, a way of getting useful information, and learning by visualizing.

Interactive Definitions

Very few students wrote responses that could be classified as *interactive definitions.* Some examples were looking at a group of words and understanding what the words meant as a whole and looking at a group of words in a sentence and comprehending them.

Functional Definitions

The remaining responses fell into the *functional definitions* category. Students' responses included enjoyment and relaxation in their definitions of reading. One student wrote that reading is something someone does for enjoyment and even does it in spare time; another wrote that reading is something done for pleasure.

QUESTION 2: DO YOU CONSIDER YOURSELF A READER? WHY OR WHY NOT?

The present investigation did not support the notion that most at-risk readers consider themselves nonreaders. More than half of the sample (58%) considered themselves readers.

Readers

Many of those who answered this question positively believed that to be a reader, one must be able to pick up a book and understand what one reads. Other students with affirmative responses believed that to be a reader, one must enjoy reading. Reading a variety of materials such as books, newspapers, and magazines, reading for pleasure, and reading daily were also factors associated with being a reader.

Nonreaders

A variety of responses was given as to why students did not view themselves as readers. The major reasons given were that their only reading was for

class assignments and that what they read was boring. Other students who responded negatively viewed themselves as nonreaders because they did not read a variety of materials, did not read for pleasure, or did not read daily. Some simply cited their lack of reading ability as the reason for viewing themselves as nonreaders.

QUESTION 3: HOW WOULD YOU DESCRIBE YOUR READING ABILITY?

The notion that at-risk students have a false perception of their reading abilities held true with this investigation. One-fourth of the students described their reading ability as excellent, really good, good, or above average, while over half of the students stated that their reading ability was average, OK, adequate, or fair. Only 22% of the students described their reading ability as below average, not very good, poor, low, or slow. One percent indicated their reading ability was heavily dependent upon what they were reading.

DISCUSSION

The results of this survey may be valuable to those who are teaching or preparing to teach college-level at-risk students. From their definitions of reading, it is evident that some students still view reading as a sounding-out activity. Forty-four percent of the students believe that reading is (1) a word-by-word procedure, (2) something to be done line by line, or (3) a skill-oriented process. For students to become proficient readers, they must view reading in a broader sense. Such narrow definitions of reading can and should be expanded through instruction.

Given that approximately half of the students defined reading as comprehending, understanding, interpreting, and/or learning, it was surprising that 42% did not consider themselves readers. Most of these students believed that to be considered a reader, one must enjoy reading and be good at it. Those who did consider themselves readers believed so because they pick up books and understand what they read or because they read often. It appears that attitudes need changing as well.

The findings related to students' perceptions of their reading ability are in agreement with the findings reported by Reed (1989). Approximately 75% of the students believed their reading ability to be average or better. It is apparent that many students who read below the college level do not perceive a need for enrolling in a course designed to help them improve their reading skills.

College students' perceptions of reading may be helpful in designing instruction. Assessment of students in college developmental reading courses should include not only reading strengths and weaknesses but also an evaluation of the affective domain. Brozo (1990) suggests that before students are tested using informal reading inventories, attitude and interest

inventories should be administered. He also suggests that examiners collect data related to the students' perceptions of their reading abilities.

Frager and Malena (1986) have suggested that student journals may also be used as diagnostic tools in the developmental reading classroom. From the journals, instructors can learn about emotional factors, studying difficulties, problems encountered in reading to learn, time management problems, and misconceptions about reading that may impair students' progress in reading.

Developmental reading classes should be designed to promote and encourage reading across the curriculum, utilizing materials that are of interest to the students rather than to improve comprehension, reading speed, vocabulary, study skills, and content area reading through rigid skill-oriented textbooks. Historically, Witty (1948), Harris (1962), and Russell (1961) suggest that college developmental reading courses should be concerned with functional and recreational reading and with the growth of reading habits, skills, and attitudes needed for living in modern society. More recently, Brittain (1982) suggests that students enrolled in developmental reading classes preferred more interesting assignments, reading materials related to career goals, and reading materials related to their required and major courses.

In an effort to achieve the goals of college developmental reading courses, news magazines such as *Time* and *Newsweek* could be used either as main or supplementary texts (Baechtold, Culross, & Gray, 1986; Frager & Thompson, 1985). Using news magazines would allow students to practice study skills and study strategies on a variety of different types of text that are interesting to them.

An effort must also be made to encourage college developmental students to read for pleasure. According to Nist and Hynd (1985), allowing class time for Sustained Silent Reading, combined with other techniques, resulted in students reading books they regarded as their all-time favorites and a wider range of materials than had previously been read.

In the words of Vacca and Padak (1990, p. 488):

> As teachers work to accommodate the needs of at-risk readers, students will learn to rethink the reading process. . . to develop positive reading self-images, attitudes, and interests, and to gain control over reading strategies that promote academic success.

Understanding college developmental readers' perceptions of reading may facilitate the accommodation process.

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Langston Hughes, Maya Angelou, and Malcolm X: Guides for College Developmental Writers in Search of Voice

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Having taught developmental writing in a department of African-American affairs for eight years, I have seen many students take to heart the words and messages of Langston Hughes, Maya Angelou, and Malcolm X. Once they've read works by these authors, these developmental writers seem to discover the value of their own life experiences, the value within themselves. They also seem more willing to search those life experiences for their own stories, and, ultimately, to share those stories in writing.

Three such students are Tim, Beverly, and Michele. All three were conditionally admitted, first semester freshmen at a large midwestern university when they were enrolled in the developmental writing class where the journal entries and essays presented in this paper were written. All three had read a selection of Hughes' poems and chapters from the autobiographies of Malcolm X and Maya Angelou. Their journal entries reflect their responses to those authors; the drafts of their essays reflect their own remarkable and unique journeys into self-discovery — as readers and writers, as human beings.

Tim's journal response to an excerpt from *The Autobiography of Malcolm X*, a short piece in which Malcolm X reveals that he taught himself to read and write by copying the dictionary while he was in jail, demonstrates a number of qualities sometimes associated with basic writers. The sentences are choppy; there are numerous mechanical difficulties. Yet Tim's content is remarkable. Malcolm X's experience brought to mind one of Tim's own, one where he helped someone else learn to read:

> Malcolm X story was very powerful it showed how this man struggled to become better reader. Something that he did on his own. I know how hard it is for a person to try to read when they can't I learn this when I worked for Project life last year it was an Adult Reading class. Working with adults, one's who can't read or write. I

saw the struggle they had. Many gave up in midstream. Many never really tried even some of the tutors quit. but some of the students were like Malcolm X who stuck it in and tries hard to learn to read. On instance [journal entry ends abruptly]

Tim and others in his class were encouraged to reread their journal entries for inspiration for their essays, and Tim did just that. The following is the third draft of Tim's essay entitled "Teacher's Pet." At this point, Tim had already shared his draft with his peers and his teacher, receiving feedback on content and specific suggestions for needed details. In this draft, Tim clearly demonstrates his greater understanding of the written code; he also displays greater awareness of his readers, establishing for them the context of the situation and providing necessary details for clear comprehension. Yet the story is all his, and the words speak of a young man who has come to realize what an important role he had in someone else's life:

Teacher's Pet

One Saturday morning, I received a telephone call from a friend who told me the library had a organization called Project Life which helped to teach adults to read, and they needed tutors to teach these adults. My friend was already an adult tutor. He knew how much I wanted to become a teacher, and he felt that this would be a wonderful experience for me, so I decided, yes, I would try tutoring adults to read.

My first student was a young guy about 27 years old. He was really gungho about learning to read; he was so anxious to learn to read that he walked from South Lorain to Lorain library which is about a 65 minute walk.

The first day of class we opened our books and began the lesson. At first he had some trouble with learning long and short vowels, but in the next couple of months he had those vowels down pat. My student's reading was getting better and better.

After five months he was able to read out of his reader. The pride I felt when he read out loud from his reader can not be explained. It was wonderful teaching a person to read and helping them to gain their self respect.

As Tim shares his story, it is evident that he, too, is discovering self-respect.

Beverly's journey is filled with even more surprises than Tim's. In her first essay for the class, Beverly had chosen to write about her three-year-old daughter, a child she had conceived when she was only 14 years old. The journal entry presented here was written during the sixth week of a 15-week semester, a week or so after Beverly's first essay about her daughter. Beverly had read several poems by Langston Hughes and had chosen to write about them. Her journal entry just hints at a most astounding essay that seems, even at this point, to be composing itself in her mind:

I really enjoyed Langston Hughes poetry. I can relate to him. At times, I like to express things that are important to me through poetry.

Langston Hughes' poems, "The Negro Speaks of Rivers" and "Mother to Son," really moved me. I'm sure there are many different ways to discribe his message in each poem.

The poems moved me in different ways. I really paid attention to the way he was trying to express himself—his feelings and opions and make them relate to my feelings and opion.

With it being Black History month his poem really made me wonder what it was like, in "Mother to Son." and how far we have come since that time.

Later, Beverly did freewriting as she attempted to find her next essay topic. She makes her associations with Hughes' message more explicit as she relates her own experiences as a mother to Hughes' insights on motherhood and life. She quotes lines from the poem that especially touched her, and she articulates for the first time that she can see herself doing something like the mother in Hughes' poem. She writes:

I personally can understand Langston Hughes poem "Mother to son." As a mother I can picture myself someday telling my daughter how hard it is in life. The mother in Langston Hughes' poem said "Life for me ain't been no crystal stair," personally, I understand what she means. The part that moved me the most was when she gave her son advice. "so boy, don't you turn your back. Don't you set down on the steps 'cause you finds it kinder hard."

I liked when she cleared it up, and really stressed to him that is wasn't easy for her either, but she still was going on. "Don't you fall now—For I'se still goin', honey, I'se still climbin', And life for me ain't been no crystal stair."

I can see myself someday, giving my family a summary of life, not using the same symbol, but giving a summary, or write a poem myself on how life has treated me, and is treating me.

The start of a poem is included in Beverly's freewriting; she explores the symbol she'd like to use to describe her life. The comparisons are just roughed out for the essay that is to come. On the left side of the page, Beverly lists the following: *Circus* and under that word, *clowns, ring masters, the tunnel of love, the house of horror, the sideshows, roller-coaster.* On the right side of the page, she jots down corresponding ideas under the title Life. She writes next to clowns, "People who don't take things serious, or who want to hurt you in their own way"; next to ring masters, "People who want to run the show, or her life"; next to the tunnel of love, "That there will be romance in her life"; next to the house of horror, "That there will be time that she will be afraid, to afraid to go on"; next to the sideshows, "That people pretend to be things that there not"; and next to roller-coaster, "Ups and downs over and over again."

These next lines are Beverly's first draft of her essay entitled, "The Understanding of a Mother." She has not yet shared the essay with anyone; these words obviously were not, however, her first thoughts on the subject. This essay was probably being written inside Beverly from the moment she interacted with Langston Hughes in "Mother to Son." She has been inspired to write her own poem, and she has made an essay out of Hughes' poem and her response to it. Beverly still displays the novice's lack of experience with the written code, but the writing is hers and her voice fills every page. In a real way, she becomes the son in the poem taking the mother's message to heart not to despair and not to give up while, simultaneously, she is the mother who in turn will encourage her own daughter to continue the struggle for survival.

The understanding of a mother

In Langston Hughes poem "Mother to Son," there was a message there that I could personally relate to. When the mother in the poem said "Life for me ain't no crystal stair," I understood perfectly what she meant. In my opion, she was trying to say that life for her wasn't perfect, it wasn't a elegant staircase, to prove my point, she went on to say "It's had tacks in it,/ And splinters,/ And boards torn up,/ And places with no carpet on the floor/ — Bare." To sum it all up, she seems to be saying that life isn't perfect always nor ever. To me, the tacks and splinters that she mentions, symbolizes the pain, or that he could get hurt and to be cautious; and boards torn up and places with no carpet, symbolize things that he has to adjust to and overcome.

As a mother, I completely understand what she told her son, and it has deeply touched me. Someday, I can see myself telling my three year old daughter—the facts of life (quote-unquote). But I think instead of telling her that Life isn't a crystal stair, I would use the circus as an example. At the circus, there is so much to see, so you make a day of it or a lifetime. I've decided to write a poem myself, about my example of life, not only for this composition but for future reference for my daughter, and I think it would go something like this—

Life of a Circus

When you're on the roller-coaster, hold
tight, while going up and down.
Watch all the little tricks of the
happy go lucky clown.
Listen closely to the ring-master,
who runs the whole show.
Ride through the Tunnel of Love,
to help a romance grow.
Run through the House of Horror
as you continue to scream.
Pay attention to the side-shows
there not at all what they seem.

After I read this poem to my daughter, I will point out what each phrase represents, for example, the roller-coaster represents every day of life; the clowns, people who don't take life serious and might hurt her; the ring-master, people who want to run her life; the Tunnel of Love, that there will be romance in her life; the House of Horror, that at times she will be scared but will get through it; and the sideshows, that there are people who pretend to be things that they aren't. And I would go on to tell her that I'm still holding on tight, watching, listening, and running. To let her know what I've been through, and that I'm still getting on with my life. Hoping she will understand and get on with her life, and learn to be independent.

In the poem "Mother to Son," the mother was telling her son to be independent, and not to wait for her, when she said "So, boy, don't you turn back./ Don't you set down on the steps/ 'Cause you finds it's kinder hard./ Don't you fall now—/For I'se still goin', honey,/ I'se still climbin',/ and life for me ain't no crystal stair."

Beverly has accepted her role as meaning maker completely. She not only evidences the kind of interactive reading that English teachers pray for, but she has taken on the role of writer/creator as well.

The last writer traveled perhaps the most difficult journey of the three.

Michele's very first piece of writing for class vividly demonstrates Macrorie's Engfish, writing to impress the English teacher. Abstract words and vague expressions that say virtually nothing sometimes produce unintended humor, and that is precisely what occurs in Michele's piece. She writes:

Striving for Goals

Striving for goals can be an essential part of a learning experience throughout college for many people. As for me I strive to succeed and I have that determination 100% behind me not under me. My goals are very clear in my mind about how I want to achieve it, when and why do I want to achieve it. In any particular reason it takes lots of will power and strategy to succeed in what you want in life. My number one goal is to be someone or something in life. Number two is to set my priorities very straight upon how I will obtain striving for my goals and number three is the success that will be there when I have succeeded. It's sometimes similar to reaching out for what you want, sometimes you may not have it but sooner or later it will be there for you.

Michele needs desperately to experience reading and writing that is meaningful for her. Her journal response to three pieces by Langston Hughes, Malcolm X, and Maya Angelou demonstrates quite a phenomenon: Michele's beginning and end are filled with Engfish; however, when she speaks of each author, Michele allows us to see a young woman struggling to make meaning for herself, both in what she has read and what she is now trying to write:

Essay

My response to each essay involves much motivation and a vivid understanding that each is trying to get a point across in examining their experience. The response brings forth what each author is or has tried to accomplish in their own special way. In My People the expression beautiful brought about a correspondence to all Afro-Americans in the world. Black is beautiful, comparing us with the stars, night, and the sun as vivid images. From the autobiography of Malcolm X the image to me involved the learning experience he perceived while in prison. When he started writing the whole entire dictionary and remembering and reading the words to become more knowledgable, it let him become free of whatever was happening around him while in prison. Free of everything. Finishing school visualized the differences among others and how these differences should be understood. When Maya dropped the dishes on the floor—and Mrs. Cullinan called her by Margaret and not Mary which Maya did not like, because her name was not Mary. In all due honesty, Maya was being respected in the end. All three pieces of writing produce a vivid sensation among one another and takes an effect in all different directions of views.

When the students brought in the first drafts of their essays on topics they had chosen, I truly feared having to respond to Michele's. What if I could say nothing positive? What if I had no idea what she was trying to say? I should have had greater faith in Hughes, Malcolm X, and Angelou, for Michele had looked deep into herself and her essay left her peers and her teacher speechless—not because we didn't understand, but because we understood so well.

As students progress with individual essays, they are asked to write about their writing before they hand in a draft for my feedback. Michele's letter to

me concerning the third draft of her first essay clearly shows that she was becoming aware of herself as a writer and what she must do to create and convey meaning clearly. She describes the point of her essay, she realizes its impact, and she seems to be aware of her inclination to write Engfish—all remarkable qualities for someone whose first piece of writing was virtually unintelligible. She writes:

Dear Mrs. S,

The main point I am trying to make in this essay is that even though my Aunt Theresa died a very young age, I will always think about and love her the way that I have always done.

So far, I'm satisfied with the way that I have shared my true feelings on this essay that I have written. An example would be when she moaned and groaned at all times of the day and night. That is when I really prayed harder than ever. I am satisfied with the way I really pretty much expressed my feelings to let it all pour out of me.

At this point, I'm still not sure about if I should have written a little more, or expressed myself by getting to the exact point.

Please give me feedback on clearly letting my feelings out and the way that I write my sentences in different structures sometimes where I can't even understand them. Should I have communicated just a little more? Do you understand my essay? It is a tragic one.

In writing about her writing, Michele conveys her understanding that what the reader understands is very important. She also realizes that sharing feelings honestly is an important part of effective writing. The young writer's goal is no longer to impress, but to share an experience and find its meaning for us and for herself. In this she surely succeeds.

The Death of my Closest Aunt

Many people have tragedies happen in their lives especially if it's someone you are really close to and who you can talk to about many things and problems. You come to find that you really love and trust this person all the time. Then this all ends so quickly because of a tragedy and why? Six years ago my Aunt Theresa passed away when she was only thirteen. She was more of a sister to me because of the closeness we shared. We were a year apart in age from one another. This is my mom's youngest sister who had cancer. No one really knew she had it until she started having trouble with her heart. She would cry everyday coming home from school saying, "I have bad pains mom and they just won't stop." Finally, my Grandma took her to the hospital and the doctor told my Grandma she had cancer and it had spread to far to catch it in time.

My Aunt Theresa stayed in the hospital from three to six months. She had gotten better from the kemotherapy treatments, but things started to get worse. She didn't really know anything about her cancer until I told her she had it. I already knew because when my mom found out from my Grandma my mom told me. No one wanted my Aunt to know because they didn't want to scare her by saying she had a really bad disease. My Aunt Theresa did not know what to think when I told her, so we talked about her having cancer when I visited her in the hospital. I told her that the doctor and grandma did not want to tell her because they didn't want to frighten her and make her worry. I was really scared for her but considered hope the whole way through for her. The kemotherapy that she was

getting didn't help at all for her. It make her weak, her hair started falling out, and it got to the point where she lost lots of weight.

I prayed so hard for her to get better but I could tell the tragedy was about to hit. It hurt me so bad. She could not control her urine anymore, so she had to wear pampers. Her eyes went up into her head and she started to moan and groan at all times of the day and night.

Four days before she died, I was in the room sitting by her side at my Grandma's house just holding her hand and saying how much I loved her and how she has been such a sister to me. I had prayed so hard at that one moment... I was in a very sad emotional state where I was crying as all thoughts focused only on my Aunt Theresa. I spoke to her and kept telling her that everything would be just fine. She had only one lung, but I knew she could understand what I was saying because she would squeeze my hand and moan. I was trying to make myself believe she would get better by having faith, but I guess that faith was waiting for her in heaven. So the time passed on. The next week I came home from school and my mother came upstairs and held her arms out, then I knew. I was so terrified I let all my fear out, the tragedy really struck me, she was so young, bright, and pretty. "The Lord took care of everything," I thought. No more suffering or pain. The family was devastated. When she died my oldest aunt was there to close her eyes and they were there to take her away. Until this day my Aunt Theresa, who was as much my sister as my aunt, still exists in my world when I picture her as if she was still here today.

Tim's, Beverly's, and Michele's essays demonstrate vividly the impact and the influence that Malcolm X, Hughes, and Angelou can have on developmental writers in search of their own voices. The journal entries of these young people reflect the empathy they feel as they read the authors' works; their essays reflect the value they find in their own life experiences and in then sharing those experiences in their own words. A developmental writing teacher could not ask for much more.

Learning Style Inventories: Efficiency Tools for College Instructors

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As a new decade is about to begin, a number of states have implemented basic skills programs for entering college freshmen. Tennessee and Texas, in particular, come to mind as examples of states in which legislators have expressed serious concerns about students' preparation for studies in higher education. Both states have initiated testing programs to help educators determine which students are in need of remediation in the areas of reading, writing, and mathematics. A careful study of the nature of the states' testing programs reveals a glaring oversight. Once students' scores are reported to institutions, remediation must take place in the areas of deficiency. Typically missing, however, is any indication of how the individual student might learn best. Thousands of scores are reported, but, as is the case with standardized group tests, little more information than is reported for youngsters in public schools is available. Information is missing about what to do next with the students who are required to continue in remediation until they can pass the necessary tests.

This situation calls for additional information to help instructors and administrators assist students in the most efficient way possible. What is needed is the type of information that can be found in learning style inventories or instruments of a similar nature that provide information on ways in which students prefer to learn. Instruction then should be delivered accordingly.

The focus of this paper is not restricted to remedial college classes. Rather, the broader context of college classrooms in any setting is addressed here. Perhaps another example of how a learning style inventory might be used is in order.

A professor at a large midwestern university expressed concern that, although he believed that his content material was good, his delivery and

the overall reception of material by his students left much to be desired. He confided that he had taught the same courses in the same way for many years. The professor further sensed a growing restiveness among his students. He was determined to find answers to the problem so that he might find ways to revitalize his own instruction. His solution was to administer a learning style inventory developed by Kolb (1977). As a result of a doctoral study in which the Kolb inventory was used, the professor became intrigued by the possibilities that the instrument offered. Kolb's procedure involves having respondents rank order sets of terms. The terms represent a learning mode that, according to Kolb, in various combinations result in a learning style. Using the information from the instrument, the professor concluded that while his delivery was in one format, his students represented different types of learners. Why not then, he reasoned, change the manner of class delivery and the nature of course assignments so as to accommodate better the different styles of his students? With revised outlines and alternative assignments, students were much more satisfied, as evidenced in their course evaluations in subsequent semesters.

The example of the colleague mentioned above was a major prompt for this writer to look further into the nature and uses of learning style inventories. Many have been developed over the years; this paper will focus on a few that serve as prime examples of what might be most useful to college instructors.

ILLUSTRATIVE INVENTORIES

A review of the literature revealed a number of inventories that are especially geared to the interests of instructors of college-age students. Their features are highlighted in capsule form below.

Inventory of Learning Processes (Schmeck, Ribich, & Ramanlah, 1977)

This inventory is a 62-item, true-and-false self-report instrument. Administration time is about 20 minutes. This inventory shows how individuals prefer to engage in activities that range from deep and elaborative to shallow and repetitive.

Learning and Study Styles Inventory (LASSI)[1]

This instrument, developed by Claire Weinstein and her associates at the University of Texas at Austin, was published in 1987. The LASSI is composed of 10 scales that measure attitude, motivation, time management, anxiety, concentration, information processing, selection of main ideas, study aids,

[1] *Learning and Study Styles Inventory* (LASSI) is available from H&H Publishing Co., Inc., 2165 Sunnydale Blvd., Suite N, Clearwater, FL 33575.

self-testing, and test strategies. It is appropriate as a screening device and can also be used to show areas of need for individual students.

Learning Modalities Inventory (Papalia, 1978)

Developed as a self-reporting ranking of 41 items, it contains the following subsections: cognitive styles, sensory modes, work habits, personal characteristics, intellectual dependency, and originality. The administration time is about 15 minutes. See the journal article in the references.

Learning Style Inventory (Canfield)[2]

Developed in 1976, this instrument of 30 items can be administered in less than 15 minutes. Its emphasis on attitudinal and affective dimensions helps the instructor to develop materials for entire classes or for individual students. It focuses on the areas of academic conditions, structural conditions, achievement conditions, content, mode of preferred learning, and expectation of performance level. The Canfieid inventory has a companion *Instructional Styles Inventory*, which is also commercially available from the source cited in the note.

Learning Style Inventory (Kolb, 1977)

The student ranks four words in each of nine sets in less than 10 minutes. For each set, the words represent the modes of feeling, watching, thinking, and doing. The emphasis is on the student's awareness of his or her own style.

Paragraph Completion Method (Hunt, 1979)

This instrument differs from others in that it calls for a written response to a topic suitable for grades 6 through adult. This instrument helps to define ways students prefer to learn. It also describes the amount of structure learners need.

Student Learning Styles Questionnaire (Grasha-Riechmann)[3]

This 90-item instrument provides good, descriptive information on student learning styles and corresponding classroom-preferred activities. The styles included are competitive-collaborative, avoident-participant, and dependent-independent. In about 20 minutes, information can be gleaned that is useful for talking with students about the course and ways of learning and adapting to different styles of instruction.

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[2] *Learning Style Inventory* (Canfield) is available from Western Psychological Services, 12031 Wilshire Blvd., Los Angeles, CA 90025.

[3] *Student Learning Styles Questionnaire* (Grasha-Riechmann) is available from Anthony F. Grasha, Faculty Resource Center, University of Cincinnati, Cincinnati, OH 45221.

It should be noted that for any of the instruments cited here, the information that can be gained is to be shared with students and is not for the exclusive use of the instructor.

CONCLUSION

On the basis of one colleague's discovery of an instrument that he used to provide for students' different learning needs, a fresh yet economical way to find comparable information is offered here. The instruments included in this paper provide a sampling of available measures. Each is an informal assessment, economical in terms of both time and cost.

The information available from learning style inventories can be quite concrete for the college classroom. The Canfield inventory, for example, deals with the matter of a student's low performance expectancy level. Professors can discuss ways to motivate students in their learning of material for specific courses so that the fear of failure is lessened and does not serve as an impediment to learning.

Learning styles are not on a scale of good and bad. Rather, they are to be seen as ways to identify how students learn and how faculty members can adapt instruction to meet those different styles. College instructors who have used learning style inventories have learned a great deal about their students and about their own teaching. It would appear that they are abiding by the poet's admonition: "Who dare to teach must never cease to learn." Learning style inventories will make this goal possible.

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Workplace Literacy: A Model for Program Development

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The Durham County Literacy Council was approached by a local construction company to provide literacy instruction for the company's quarry and construction services divisions. The company was involved in efforts to improve the general quality of all working situations and believed that literacy instruction would benefit many quarry workers. After discussing ways to meet the company's literacy needs, company management and the Director of the Literacy Council decided that the Council should develop a program based, in part, on workplace forms and manuals and employing a learner-responsive curriculum model for instruction.

The Literacy Council contracted with the North Carolina Center for Literacy Development, a nonprofit organization providing technical assistance and training, to provide assistance with curriculum development and training of volunteers. The Center provided the services of a nationally recognized consultant to design workplace-based instructional materials and to assist in training teachers to use these materials; the Center also provided general support and program evaluation.

PROGRAM DESCRIPTION

The original program was scheduled for 10 weeks, from February to April, 1989. At the end of that time, the program was evaluated and modifications were made before the program was implemented on a continuing basis in fall 1989. The experiences described here are based on the original program.

Teachers for the program were Literacy Council volunteers. They were given a one-day training workshop to prepare them to teach in a workplace site. They learned instructional strategies focusing on learners and developed a general outline for designing lessons based on learner goals and interests. The teachers met weekly with the Director of the Literacy Council to evaluate progress and design lessons.

Some initial lessons were provided for teachers; lessons were designed to help students think about relationships in language and thinking. Teachers learned to use these materials and to develop lessons from company forms and manuals. They elicited stories from students and used these to create highly individualized lessons.

The Director interviewed 16 company employees prior to the start of the program. The employees stated such reasons for participating as needing to read better to do their jobs satisfactorily, wanting to provide better for their children, and wanting to take the GED. The Director administered measures of word recognition and reading comprehension and obtained writing samples from each of the employees. Of the employees interviewed, 10 participated in the original program. They ranged from almost completely illiterate to fairly accomplished basic readers who wanted to hone spelling and vocabulary skills and to expand their knowledge base.

Samples of students' reading and writing were collected regularly during the original program. At the end of the 10 weeks, the Director again interviewed each participant and administered measures of word recognition, comprehension, and writing. Students discussed their accomplishments during the program.

Upon completion of the10-week program, the Director of the Literacy Council and the staff of the Center for Literacy Development conducted a program evaluation. Samples of reading and writing conducted during interviews and classes were used along with comments from students, teachers, and company representatives. Recommendations based on the evaluation included (1) instituting a continuous literacy program at the company with voluntary participation during the work day and with classes scheduled so as not to interfere unduly with work, (2) paying a small stipend to teachers, (3) expanding teacher training and continuing weekly supervision by the Director, and (4) developing further curriculum based on company materials and student generated stories, which included attention to spelling and provided materials for in-class and out-of-class reading.

TOWARD A MODEL FOR WORKPLACE PROGRAMS

Anticipating that the program would be replicated within the construction company and that there would be requests from other community corporations for workplace literacy programs, the Director of the Literacy Council outlined a preliminary model for program development. The model is based on the belief that the best workplace literacy programs are

those in which instructional materials based on workplace literacy demands are used in concert with a variety of other literacy materials. In such programs, workers' individual literacy goals (personal as well as work-related) and employers' literacy requirements are combined to develop broad-based curricula. The result is workers whose literacy skills are greatly improved and who are capable of meeting the literacy demands of potential as well as of present jobs.

Program development requires professional expertise in reading instruction, adult education, literacy needs assessment, program and curriculum development, materials selection and development, and individual and program evaluation. It also requires the organizational capacity to complete such tasks as literacy needs assessment, curriculum development, teacher training and supervision, and program administration. Teachers must be willing and able to deliver curriculum, to assist with materials selection and development, and to evaluate individuals and the program. The company in which the program is to be developed must be committed to the literacy effort and willing to bear costs of program development, instructional staff and materials, and employee participation.

Considerations that should be made by groups intending to develop workplace literacy programs are listed in Table 1 under each of several program elements. Included here are considerations for curriculum development, teacher training, materials development and provision, and program administration. These points go beyond the stated considerations usually found in discussions of workplace literacy programs, which focus primarily on the literacy audit and provide little attention to other elements of successful programs.

In preparing for involvement in future workplace literacy programs, the Durham County Literacy Council proposed a schedule for determining shared costs (see Table 2). These would be applicable to workplace literacy programs to be conducted by an agency outside the company involved.

SUMMARY

When asked to provide a literacy program for quarry and construction services employees, the Durham County Literacy Council designed a program using student writings and company materials as instructional material. Volunteer teachers were trained to develop lessons which were responsive to learner goals. Reading and writing samples were used to evaluate student success. As a result of this experience, the Director of the Literacy Council developed a set of considerations and a schedule for allocating costs for other groups wishing to implement similar programs.

TABLE 1
Considerations in Developing Workplace Literacy Programs

Initial provider/Company discussion

- Company needs, goals, constraints
- Provider capabilities, constraints
- Discussion of program possibilities, company needs
- Tentative agreement on program goals, elements, responsibilities

Literacy needs assessment (Literacy audit)

- Literacy requirements of workplace
- Workplace materials and skill proficiency requirements
- Worker/supervisor perceptions of literacy requirements
- Worker basic skills
- Worker literacy test results vs. performance

Program development/Administration

- Provider/company contract
- Ongoing curriculum development
- Supervision of teachers, students, program
- Decision points
- Purchase, distribution of commercial materials, supplies

Curriculum development

- Scope, sequence of program
- Workplace materials
- Frameworks for learner-initiated materials
- Commercial materials
- Instructional strategies

Teacher recruitment, training

- Volunteers/company employees, professionals
- Learner-centered curriculum
- Use of workplace, learner-initiated materials
- Instructional strategies
- Responsibilities (students, curriculum, assessment)

Learner recruitment, assessment, goal setting

- Literacy goals
- Workplace aspirations
- Literacy abilities (real, perceived)

Learner/Program evaluation

- Achievement of goals
- Gains in literacy abilities
- Assessment measures, schedule

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TABLE 2
Durham County Literacy Council—Determining Costs for Workplace Literacy Programs

Tasks, person(s) responsible	Cost	Source of funds
Project Director/Consultant		
• Needs assessment • Program development • Curriculum development • Materials development, selection • Teacher recruitment, training • Evaluation	$	Company/Provider
• Supervision of teachers • Program administration	Absorbed in salary	Provider
• Purchase of instructional materials, supplies	$	Company/Provider
• Travel (consultant)	$	Company
• Travel (director)	$	Provider
Teachers		
• Instruction • Training (pre- and inservice)	$	Company
• Materials development, selection, evaluation	Voluntary	Teachers